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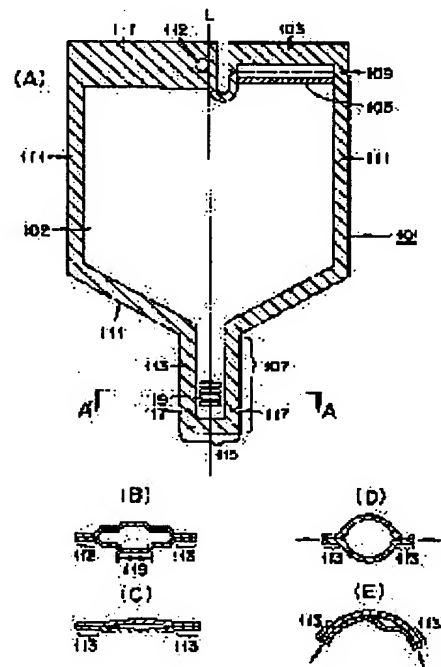
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## (54) PRESERVING CONTAINER FOR ENTERAL FEEDING NUTRIENT AND PORTABLE WATER

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent a preserving container from intrusion of foreign matters and fungi by forming a first seal part for retort preservation and a second seal part for prevention of intrusion of foreign matters and fungi onto the upper part of the main body and a protrusion part with take-out port of unused certification onto the lower part of the main body.

SOLUTION: A second seal part 105 is equipped with an openable zipper structure. Thereby, an enteral nutrient, the content in the main body 11, is supplied to a subject as a nutrition, for instance, through a nutrition drip set or an enteral nutrition tube. Then, the container is cut separately parallel with the second seal part 105 first, the first seal part is removed, the second seal part 105 is opened, and required water is injected through the second seal part 105. After the injection, the zipper type second seal part 105 is simply, quickly, and securely closed by fingers. Since the tightly closed condition is sensed by finger touch, mis-closing can be eliminated to prevent intrusion of foreign matters and fungi.



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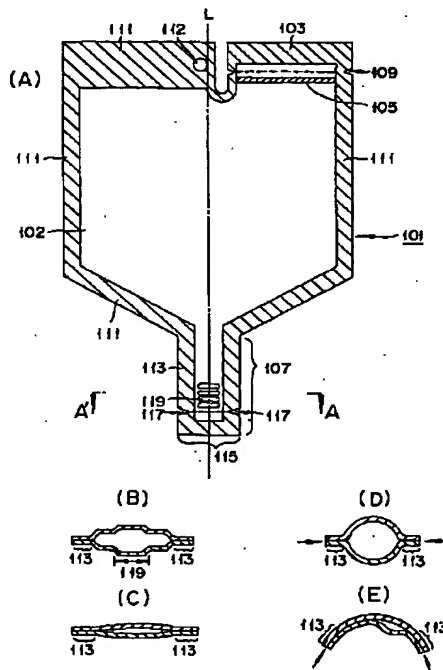
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(54) 【発明の名称】 経腸栄養剤及び飲料水溶液の保存容器およびその接続部材

(57) 【要約】

【課題】 ソフトバック式の経腸栄養剤保存容器において、水分補給後にも異物や菌の侵入を防止することができ、また、内容物の液漏れの生じないソフトバック式の経腸栄養剤保存容器を提供する。

【解決手段】 本体上部にレトルト保存用の第1封止部と使用時に異物や菌の侵入防止用の第2封止部が形成されてなり、本体下部に未使用保証構造の取出口を有する突出部が形成されてなることを特徴とするソフトバック式の経腸栄養剤保存容器。



## 【特許請求の範囲】

【請求項1】 本体上部にレトルト保存用の第1封止部と使用時に異物や菌の侵入防止用の第2封止部が形成されてなり、

本体下部に未使用保証構造の取出口を有する突出部が形成されてなることを特徴とするソフトバック式の経腸栄養剤保存容器。

【請求項2】 前記第1封止部と第2封止部の間に切り込み部を設けてなることを特徴とする請求項1に記載の経腸栄養剤保存容器。

【請求項3】 前記内側の第2封止部が、開閉自在なジッパー式のシール構造を有することを特徴とする請求項1または2に記載の経腸栄養剤保存容器。

【請求項4】 前記内側の第2封止部が、栄養分保存容器本体に一端が支持された弾性基部片とその先端に設けられた落下菌ないし異物の侵入を防止する弁体部位とからなる構造を有することを特徴とする請求項1または2に記載の経腸栄養剤保存容器。

【請求項5】 上部に設けられた2重の封止部は、栄養分保存容器に封入された内容物を前記取出口より取り出した後に、前記第1封止部と第2封止部の間を切断して、内側の第2封止部を開いて水分を注ぎ込んだ後、該第2封止部を閉じて、異物ないし菌の侵入を防止すべく形成されていることを特徴とする請求項1～4のいずれか1項に記載の経腸栄養剤保存容器。

【請求項6】 前記突出部に形成された取出口の未開封保証構造が、該突出部の外周縁部がシールされ、該突出部の先端シール部よりも本体側の側面シール部に切り込み部を設けた構造によって構成されていることを特徴とする請求項1～5のいずれか1項に記載の経腸栄養剤保存容器。

【請求項7】 前記突出部には、開封された取出口に系外の接続部材を導入し易くするための挿入ガイド機構が設けられてなることを特徴とする請求項1～6のいずれか1項に記載の経腸栄養剤保存容器。

【請求項8】 前記挿入ガイド機構が、取出口を開口させるための機構であることを特徴とする請求項7に記載の経腸栄養剤保存容器。

【請求項9】 前記取出口を開口させるための機構として、切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの凸部ないし凹部が形成されていることを特徴とする請求項8に記載の経腸栄養剤保存容器。

【請求項10】 前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの熱印加部ないし高周波印加部が形成されていることを特徴とする請求項8に記載の経腸栄養剤保存容器。

【請求項11】 前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出

部の軸線に直交する面内に延びるように、少なくとも1つのシート状物が外接されていることを特徴とする請求項8に記載の経腸栄養剤保存容器。

【請求項12】 前記取出口を開口させるための構造として、開口化部材が、少なくとも系外の接続部材を導入するまでは突出部の経腸栄養剤流路部に保持されていることを特徴とする請求項8に記載の経腸栄養剤保存容器。

【請求項13】 前記挿入ガイド機構として、取出口の開封時にシート状物の先端部が該取出口よりも外側に出るように、該突出部の軸線方向に延びるように、該シート状物の一部が切り込み部よりも本体側の突出部の内面に固定されていることを特徴とする請求項7に記載の経腸栄養剤保存容器。

【請求項14】 前記挿入ガイド機構として、切り込み部よりも容器本体側の突出部の内面にリブが形成されていることを特徴とする請求項8に記載の経腸栄養剤保存容器。

【請求項15】 前記取出口を含む前記突出部の横幅が、加熱滅菌処理によるねじれを防止し得るように広く形成されていることを特徴とする請求項1～14のいずれか1項に記載の経腸栄養剤保存容器。

【請求項16】 前記取出口を含む前記突出部の横幅が、下記式

$$2 \leq y/x \leq 6$$

(ここで、 $x$ は取出口を含む前記突出部の横幅であり、 $y$ は経腸栄養剤保存容器本体の横幅である。)を満足するように広く形成されていることを特徴とする請求項1～15のいずれか1項に記載の経腸栄養剤保存容器。

【請求項17】 一端が請求項15または16に記載の経腸栄養剤保存容器の取出口に接合し得る構造を有し、他端が経腸栄養補給用チューブまたは経腸栄養カテーテルと接続し得る構造を有することを特徴とする接続部材。

【請求項18】 前記経腸栄養剤保存容器の取出口を含む突出部に接合する側の先端部が、開封された取出口に導入し易くするための挿入ガイド構造となっていることを特徴とする請求項17に記載の接続部材。

【請求項19】 前記挿入ガイド構造が、斜めに切断された挿入開口部を有することを特徴とする請求項17に記載の接続部材。

【請求項20】 経腸栄養剤保存容器の取出口との接続部より内容物がにじみ出すのを防止し得る材料で、形成または表面処理されていることを特徴とする請求項17～19のいずれか1項に記載の接続部材。

【請求項21】 請求項1～16のいずれか1項に記載の経腸栄養剤保存容器の開封後の取出口に導入し易くための挿入ガイド構造部、および挿入後に接続部材が取出口から脱落するのを防止するための脱落防止構造部が設けられてなることを特徴とする経腸栄養剤保存容器用の

接続部材。

【請求項22】 前記挿入ガイド構造部が、前記容器開封後の取出口の断面形状に適合するように扁平した断面楕円形状の挿入部であることを特徴とする請求項21に記載の接続部材。

【請求項23】 前記脱落防止構造部が、接続部材の前記容器開封後の取出口への挿入部の外周上に設けられる鉾巻き状の突出部であることを特徴とする請求項21または22に記載の接続部材。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、新規なソフトバック式の経腸栄養剤保存容器に関するものである。より詳しくは、消化態、半消化態以外の濃厚な栄養剤や流動食などの経腸栄養剤を被術者に挿入する経腸栄養補給用チューブ（経鼻的または経皮的に用いる経腸栄養カテーテル）、さらに必要に応じて、栄養点滴セット（経腸栄養剤保存容器への接続部材、接続ゴム、点滴筒、ローラ・クランプ等を有する輸液セットなど）を通じて補給する際に用いられるソフトバック式の経腸栄養剤保存容器に関するものである。

【0002】

【従来の技術】現在、消化態、半消化態以外の濃厚な栄養剤や流動食などの経腸栄養剤を被術者に挿入する経腸栄養補給用チューブ（経鼻的または経皮的に用いる経腸栄養カテーテル）、さらに必要に応じて、栄養点滴セット（経腸栄養剤保存容器への接続部材、接続ゴム、点滴筒、ローラ・クランプ等を有する輸液セットなど）を通じて補給する際に用いられている経腸栄養剤保存容器の代表的なものとしては、上部開放型の注ぎ口付濃厚流動食専用容器が用いられている。該注ぎ口付濃厚流動食専用容器においては、該容器の下部に設けられた流動食取出口に接合された延長チューブを介して経鼻経腸栄養カテーテル等の各個の被術者の症状等に応じて選択されたカテーテルを被術者の鼻とか口から胃の中まで該カテーテルの先端部に設けられたX線感受部をモニタしながら差し込み、該カテーテルの先端部近傍に設けられた複数個の穴より流動食を胃に流し込むようにするものである。こうした上部開放型の注ぎ口付濃厚流動食専用容器を用いた濃厚流動食の院内感染予防に配慮した取り扱い方法としては、①毎食配膳30分前に調整した濃厚（高栄養）流動食を消毒済みの注ぎ口付濃厚流動食専用容器に分注する。②配膳された濃厚流動食は、細菌に対し良好な培地となるので、直ちに注入開始する。手指を洗浄し汚染を防止する。③一度に注入しない場合、残量は直ちに密封し、保冷する。室温での放置は避ける。④残量を使用する場合、病棟の電子レンジで適温にし、注入する。⑤注入後の専用コップは下膳車に返却する。病室に放置しないこと。⑥経腸栄養製剤は各病棟で作製使用するが、これも細菌汚染の温床であり、取り扱いには注意

を要する。⑦上部開放型の注ぎ口付濃厚流動食専用容器は一回（被術者に必要とされる分量）注入が終了したら、追加投与することなく、消毒した後に使用する。消毒法は80倍ミルトン液または50倍テグ51液を使用し、内側も消毒されるように空気を追い出し、1時間以上つけておく、とするものである。なお、該濃厚流動食専用容器は消毒して再使用できるように硬質系樹脂成形品が用いられている。

【0003】なお、院内感染を予防する目的で、注ぎ口付濃厚流動食専用容器の注ぎ口には、該注ぎ口に嵌合する蓋体が着脱自在に取り付けられるようになってきている。そして、被術者の病状などに応じて所定容量の濃厚流動食を分注する際、および該濃厚流動食を補給した後に被術者へ水分補給（さらには、容器内部に残留する濃厚流動食を希釈して完全に被術者に補給する目的もある）を行うために飲料水を注ぎ口より注ぎ入れる際以外には、注ぎ口は当該蓋体が装着され閉じた状態にある。

【0004】しかしながら、こうした上部開放型の注ぎ口付濃厚流動食専用容器では、濃厚流動食や飲料水を流動食容器に注ぎ入れる際に、看護婦などが蓋体を外して専用コップ等の容器に調整した濃厚流動食や飲料水を医者の処方箋に従って所要量になるように該濃厚流動食専用容器に付された目盛りに注意しながら注入する必要がある。そのため、この注入（分注）操作中はどうしても空気中の異物や菌が侵入するため装置内の無菌状態を保持することができず、注ぎ口よりの汚染などから菌注入の機会が増加する。また、こうした操作は、看護婦などが手作業で行う必要上、そのたびに手を消毒し、手袋やマスクをして注意深く行う必要があり、看護婦などへの負担が大きいものであった。また、濃厚流動食専用容器に注ぎ込まれる流動食や飲料水も、毎回調整を行う必要があり、調理師などへの負担が大きいほか、コスト高になり患者の医療費負担が増大するものでもあった。

【0005】そこで、濃厚流動食専用容器への菌の侵入による院内感染や異物の混入を防止し、かつ経腸栄養剤を予め殺菌処理して保存できるようにレトルト保存可能な容器とし、さらに取出口に未開封の保証ができるように未開封保証構造を設けた、ソフトバック式の経腸栄養剤保存容器が使われるようになってきている。

【0006】こうした従来のソフトバック式の経腸栄養剤保存容器では、経腸栄養剤を所定量封入した後、121℃×30分間滅菌処理されている。そして、該経腸栄養剤保存容器本体の下部に取り付けられた経腸栄養剤取出口を有する硬質樹脂製の経腸栄養剤取出口用部材には、内容物が無菌状態にあり、該内容物の正当性、安全性等を証明するためのキャップ（未開封証明構造物）が装着されており、使用時に該キャップを切り離して開栓し、これに連結チューブを接続することで、無菌系を保証しようとするものである。

【0007】しかしながら、水分補給するには、該ソフ

トバック式の経腸栄養剤保存容器の上部を消毒したハサミ等でカットし、この切り口より飲料水を適当な注入器により注ぎ込む必要があった。そのため、一旦、経腸栄養剤保存容器の上部をカットした後は、かかる切り口は開放したままであり、該開放部からの菌の侵入の機会が多く院内感染や異物混入のおそれが残っているのが現状である。

【0008】また、この経腸栄養剤取出口を有する硬質系樹脂製の経腸栄養剤取出用部材は、軟質系樹脂製の経腸栄養剤保存容器本体に、通常は熱シールにより溶融接着して取り付けられている。この異種材質同士の熱シールでは本体の外周縁部のシール部分に比して、十分な接着強度が得られにくく、内容物の封入や滅菌処理時、さらにはその後の移送運搬時や取り扱い時等に、外的負荷（特に滅菌処理）が加えられることで、経腸栄養剤取出用部材と経腸栄養剤保存容器本体との接着部分では十分なシール状態が保たれず、内容物が当該接着部分より漏れ出すとした問題があった。

【0009】

【発明が解決しようとする課題】そこで、本発明の目的は、上記問題点を鑑み、ソフトバック式の経腸栄養剤保存容器において、水分補給後にも異物や菌の侵入を防止することができ、また、内容物の液漏れの生じないソフトバック式の経腸栄養剤保存容器を提供するものである。

【0010】

【課題を解決するための手段】本発明者らは、上記目的を達成すべく、ソフトバック式の経腸栄養剤保存容器に関し鋭意検討した結果、上部に2重の封止構造を設けることで、水分補給後にも異物や菌の侵入を効果的に防止できるので院内感染の予防ができるとともに、経腸栄養剤保存容器本体の一部を用いて取出口を形成することで、シール接着する際に強度のバラツキがなく、一定の接着強度を確保することができるため、予定する外的負荷量（例えば、JISなどで要求される量）の範囲内では、なんら液漏れを起こすことがない経腸栄養剤保存容器を得ることができることを見出し、かかる知見に基づき本発明を完成するに至ったものである。

【0011】すなわち、本発明の目的は、下記（1）～（23）により達成される。

【0012】（1） 本体上部にレトルト保存用の第1封止部と使用時に異物や菌の侵入防止用の第2封止部が形成されてなり、本体下部に未使用保証構造の取出口を有する突出部が形成されてなることを特徴とするソフトバック式の経腸栄養剤保存容器。

【0013】（2） 前記第1封止部と第2封止部の間に切り込み部を設けてなることを特徴とする上記（1）に記載の経腸栄養剤保存容器。

【0014】（3） 前記内側の第2封止部が、開閉自在なジッパー式のシール構造を有することを特徴とする

上記（1）または（2）に記載の経腸栄養剤保存容器。

【0015】（4） 前記内側の第2封止部が、栄養分保存容器本体に一端が支持された弾性基部片とその先端に設けられた落下菌ないし異物の侵入を防止する弁体部位とからなる構造を有することを特徴とする上記（1）または（2）に記載の経腸栄養剤保存容器。

【0016】（5） 上部に設けられた2重の封止部は、栄養分保存容器に封入された内容物を前記取出口より取り出した後に、前記第1封止部と第2封止部の間を切断して、内側の第2封止部を開いて水分を注ぎ込んだ後、該第2封止部を閉じて、異物ないし菌の侵入を防止すべく形成されていることを特徴とする上記（1）～（4）のいずれか1つに記載の経腸栄養剤保存容器。

【0017】（6） 前記突出部に形成された取出口の未開封保証構造が、該突出部の外周縁部がシールされ、該突出部の先端シール部よりも本体側の側面シール部に切り込み部を設けた構造によって構成されていることを特徴とする上記（1）～（5）のいずれか1つに記載の経腸栄養剤保存容器。

【0018】（7） 前記突出部には、開封された取出口に系外の接続部材を導入し易くするための挿入ガイド機構が設けられてなることを特徴とする上記（1）～（6）のいずれか1つに記載の経腸栄養剤保存容器。

【0019】（8） 前記挿入ガイド機構が、取出口を開口させるための機構であることを特徴とする上記（7）に記載の経腸栄養剤保存容器。

【0020】（9） 前記取出口を開口させるための機構として、切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの凸部ないし凹部が形成されていることを特徴とする上記（8）に記載の経腸栄養剤保存容器。

【0021】（10） 前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの熱印加部ないし高周波印加部が形成されていることを特徴とする上記（8）に記載の経腸栄養剤保存容器。

【0022】（11） 前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つのシート状物が外接されていることを特徴とする上記（8）に記載の経腸栄養剤保存容器。

【0023】（12） 前記取出口を開口させるための構造として、開口化部材が、少なくとも系外の接続部材を導入するまでは突出部の経腸栄養剤流路部に保持されていることを特徴とする上記（8）に記載の経腸栄養剤保存容器。

【0024】（13） 前記挿入ガイド機構として、取出口の開封時にシート状物の先端部が該取出口よりも外側に出るように、該突出部の軸線方向に延びるように、

該シート状物の一部が切り込み部よりも本体側の突出部の内面に固定されていることを特徴とする上記(7)に記載の経腸栄養剤保存容器。

【0025】(14) 前記挿入ガイド機構として、切り込み部よりも容器本体側の突出部の内面にリブが形成されていることを特徴とする上記(8)に記載の経腸栄養剤保存容器。

【0026】(15) 前記取出口を含む前記突出部の横幅が、加熱滅菌処理によるねじれを防止し得るように広く形成されていることを特徴とする上記(1)～(14)のいずれか1つに記載の経腸栄養剤保存容器。

【0027】(16) 前記取出口を含む前記突出部の横幅が、下記式

$$2 \leq y/x \leq 6$$

(ここで、 $x$ は取出口を含む前記突出部の横幅であり、 $y$ は経腸栄養剤保存容器本体の横幅である。)を満足するように広く形成されていることを特徴とする上記

(1)～(15)のいずれか1つに記載の経腸栄養剤保存容器。

【0028】(17) 一端が上記(15)または(16)に記載の経腸栄養剤保存容器の取出口に接合し得る構造を有し、他端が経腸栄養補給用チューブまたは経腸栄養カテーテルと接続し得る構造を有することを特徴とする接続部材。

【0029】(18) 前記経腸栄養剤保存容器の取出口を含む突出部に接合する側の先端部が、開封された取出口に導入し易くするための挿入ガイド構造となっていることを特徴とする上記(17)に記載の接続部材。

【0030】(19) 前記挿入ガイド構造が、斜めに切断された挿入開口部を有することを特徴とする上記(18)に記載の接続部材。

【0031】(20) 経腸栄養剤保存容器の取出口との接続部より内容物がにじみ出すのを防止し得る材料で、形成または表面処理されていることを特徴とする上記(17)～(19)のいずれか1つに記載の接続部材。

【0032】(21) 上記(1)～(16)のいずれか1つに記載の経腸栄養剤保存容器の開封後の取出口に導入し易くするための挿入ガイド構造部、および挿入後に接続部材が取出口から脱落するのを防止するための脱落防止構造部が設けられてなることを特徴とする経腸栄養剤保存容器用の接続部材。

【0033】(22) 前記挿入ガイド構造部が、前記容器開封後の取出口の断面形状に適合するように扁平した断面楕円形状の挿入部であることを特徴とする上記(21)に記載の接続部材。

【0034】(23) 前記脱落防止構造部が、接続部材の前記容器開封後の取出口への挿入部の外周上に設けられてなる鉢巻き状の突出部であることを特徴とする上記(21)または(22)に記載の接続部材。

【0035】

【発明の実施の形態】本発明のソフトバック式の経腸栄養剤保存容器は、本体上部にレトルト保存用の第1封止部と使用時に異物や菌の侵入防止用の第2封止部が形成されてなり、本体下部に未使用保証構造の取出口を有する突出部が形成されてなることを特徴とするものである。

【0036】以下に、本発明の実施の形態を図面を用いて詳細に説明する。

【0037】図1は、本発明のソフトバック式の経腸栄養剤保存容器の代表的な一実施形態を表す概略図である。

【0038】図1に示すように、本実施形態のソフトバック式の経腸栄養剤保存容器101には、本体上部にレトルト保存用の第1封止部103と使用時に異物や菌の侵入防止用の第2封止部105が形成されており、本体下部に未使用保証構造(開封構造を含む)の取出口を有する突出部107が形成されている。

【0039】また、前記第1封止部103と第2封止部105の間に上部切り込み部109が設けられている。これにより、図中に示す破線に沿って第2封止部105に並行に切り裂くことができ、上部の第1封止部103を取り除くことができる。

【0040】なお、本体上部にレトルト保存用の第1封止部103は、本体上部を含む本体の全周縁部にわたって、例えば、熱シールまたは高周波シールにより溶融接着されたシール構造のレトルト保存用の第1封止部103およびこれに連通する全周縁部にわたるレトルト保存用の周縁封止部111が形成されている。また、レトルト保存用の周縁封止部111のうち、容器本体上部であって、上記2重の封止部103、105が設けられていない封止部111の軸線ないしその近傍には、本経腸栄養剤保存容器101をフック等に吊して支持するための穴112があけられている事が望ましい。すなわち、上記2重の封止部103、105を容器本体上部の端から端まで全体にわたって設けてもよいが、むしろ水が簡単に注入できる程度の範囲に止めるのが、支持用の穴112を形成でき機能的でもあり、また開封時に異物や菌の侵入を最小限に止めることができる点からしても優れている。

【0041】また、本実施態様による第2封止部105は、開閉自在なジッパー式のシール構造(開閉自在なジッパー式のシール構造としては、ジッパー付き食品保存袋「ジップロック」(登録商標)で用いられているのと同様の構造が例示できる。)を有するものである。当該第2封止部105を設けることにより、本体111内の内容物である経腸栄養剤を取出口より、例えば、栄養点滴セット(輸液セット)、経腸栄養チューブ(カテーテル)を通じて被術者に補給した後に、従来は、ソフトバック式の経腸栄養剤保存容器の上部をカットして水分を注入していたが、本実施態様では、先述したように、図中に示

す破線に沿って第2封止部105に並行に切り裂き、上部の第1封止部103を取り除き、当該第2封止部105を開封し、ここより必要な水分を注入すればよく、注入後は、当該ジッパー式の第2封止部105を簡単かつ素早く指でパチパチと確実に閉じ、指先の感触で密閉された感じがわかるので、閉め忘れがなく以後の異物や菌の侵入を防止することができるのである。なお、本実施態様による第2封止部105である開閉自在なジッパー式のシール構造を有する容器（バッグ）は、フィルム成形工程で、該フィルムを延伸して巻きとる捲取ロールの所定の位置に適当な大きさの溝部を設けて凸部を有するフィルムを形成し、同様に、該凸部に対応する凹部を有するフィルムを形成する事ができ、これらを重ね合わせて適当な金型で打ち抜き、周縁部を熱シールで溶融接着することで、所望の開閉自在なジッパー式のシール構造を有する容器（バッグ）を作る事ができる。また、上記したように一体的に開閉自在なジッパー式のシール構造を有する容器（バッグ）を製造しなくとも、本体部分と当該開閉自在なジッパー式のシール構造を有する本体上部とを別々に製造し、後で熱ないし高周波等により溶融接着して一体化させて所望の容器（バッグ）を製造してもよい。この際、延伸方向が該ジッパーの長手方向となるようにして製造しておくことで、切り込み部から、切る方向（図1に破線で示す方向）の指向性が製造時に付与されるため、極めて簡単に切る事ができる（なお、このことは、後述する本体下部の突出部に設けた切り込み部においても同様におこなうことができる。）。

【0042】なお、本発明の経腸栄養剤保存容器では、その製造方法に関しては、何ら制限を受けるものではなく、従来既知の製造技術を適宜組み合わせることで製造することができる事は言うまでもない。

【0043】なお、本発明では、上記実施形態のほか、前記第2封止部を図2に示すような他の実施形態とすることによっても所期の目的を達成することができる。

【0044】すなわち、図2に示すように、本発明の他の実施態様としての第2封止部205は、栄養分保存容器本体202に一端が、例えば、熱融着などにより接着支持された弾性基部片207とその先端に設けられた落下菌や異物の侵入を防止する弁体部位209とからなる構造を有する。該弁体部位209は、図2の破線で示すように、弾性基部片207を起点にして上に持ち上げることができ、離せば元の状態（図2の実線で示す弁体部位209の状態）に戻る。そのため、熱ないし高周波シール等により融着されたレトルト保存可能なように封止された第1封止部203を切り取った後に、該弁体部位209を持ち上げて水分を注入した後、元の状態に戻すことで、異物や菌の侵入（特に、落下菌や異物の侵入）を封止（防止）することができる。

【0045】なお、本発明では、上部に設けられた2重の封止部は、上記実施形態に示すものに限定されるもの

ではなく、栄養分保存容器に封入された内容物を取出口より取り出した後に、前記第1封止部と第2封止部の間を切断して、内側の第2封止部を開いて水分を注ぎ込んだ後、該第2封止部を閉じて、異物や菌の侵入を防止することができるように形成されているものであれば、特に制限されるものではなく、従来既知の封止構造を適宜選択して利用することができる。

【0046】次に、前記突出部107に形成された取出口の未開封保証構造としては、該突出部107の外周縁部113がシールされ、該突出部107の先端シール部115よりも容器本体102側の側面シール融着部に下部切り込み部117を設けた構造によって構成されている。すなわち、下部切り込み部117より、図1の突出部107に示す破線に沿って切り裂く（＝開封する）ことで、突出部107に取出口（当該破線の位置に作られる切り口）を形成することができる。従って、未開封では取出口（切り口）は形成されておらず、内容物の安全性は保証されるものである。一方、切り裂いた後は開封部を閉じて元に戻すことはできず、未開封での内容物の未使用性も保証される。

【0047】さらに、本発明では、前記突出部には、開封された取出口（開封時に形成される切り口）に系外の接続部材を導入し（差し込み）易くするための挿入ガイド機構、特に取出口を開口させるための機構が設けられている事が望ましい。本実施態様では、前記取出口を開口させるための機構として、図1（A）および図1（B）（図1のA-A'線に沿った断面拡大図）に示すように、切り込み部117よりも本体102側の突出部107に、該突出部107の軸線Lに直交する面内に延びるように、少なくとも1個、好ましくは2～5個（図1では4個を例示）の凸部（ないし凹部）119が形成されている。かかる構造を設けることで、突出部107に示す破線に沿って切り裂いた（＝開封した）状態では、図1（C）に示すように、当該取出口（切り口）は閉じた状態になって場合に、図1（B）のA-A'線に沿った断面拡大図に示す矢印の方向に親指と人差し指とで押すことで、確実に開口する方向に力が向かうようにできるため、図1（E）のような全体が曲がった状態になることなく、図1（D）に示すように、取出口（切り口）を開口状態にすることができる。さらに、本発明では、該突出部107の軸線Lに並行に面内に延びるように凸部（ないし凹部）を形成することもできるが、該突出部107の軸線Lに直交する面内に延びるように凸部（ないし凹部）を形成することで、系外の接続部材を導入した際に内容物を流出しにくくする効果を奏するほか、切り込み部から切り裂く場合にも、該凸部（ないし凹部）がガイド的な役割をし、該凸部（ないし凹部）に沿って切り裂ける利点を有する。

【0048】また、突出部の経腸栄養剤流路内部には、系外の接続部材を導入した（差し込んだ）後に抜けにくいように、凹凸形状やテーパーにしてもよい。すなわ



ち、現在市販されている多くの系外の接続部材は、例えば、図6に示すように、(1) 略テーパ状の円柱形状の先端部が、経腸栄養剤保存容器の突出部607の取出口(切り口)に導入し易いように斜めにカットされた系外の接続部材620や、図7に示すように、(2) 特にテーパを設けていない真っ直ぐな円柱形状の先端部が、経腸栄養剤保存容器の突出部707の取出口(切り口)に導入し易いように斜めにカットされた系外の接続部材720などがある。したがって、こうした系外の接続部材に対応する経腸栄養剤保存容器の突出部では、該突出部の経腸栄養剤流路の内周面と系外の接続部材の外周面とが接触面を多くかつ突出部が系外の接続部材を押さる力を利用して突出部から系外の接続部材が脱離することなく、液漏れを防止する事ができるように、例えば、図6に示すように、(1) 系外の接続部材620を導入したときの突出部607(特に経腸栄養剤流路)の形状が略逆テーパ状の円柱形状になるものや、図7に示すように、(2) 系外の接続部材720を導入したときの突出部707(特に経腸栄養剤流路)の形状が、特にテーパがなく真っ直ぐな円柱形状になるものである。

【0049】さらに、本発明では、図8に示すように、突出部807の軸線Lに並行に面内に延びるように凸部819(ないし凹部)を形成することもできるが、この場合には、切り込み部817から切り裂く場合にガイドとなる凸部が図6、7に示すように切り裂き線に並行に設けられていないため、引き裂く際に切り裂き線に並行に力が加わりにくく、むしろ凸部(ないし凹部)819が切り裂く際にガイド的な働きをしてしまい該凸部(ないし凹部)819に並行に切り裂かれてしまったりして、きれいな切り口にならず、そのため液漏れが生じるほか、ひどい場合には、切り裂きが、本体まで達してしまい使いものにならなくなるおそれがあり、わざわざ消毒したハサミ等を用いて慎重に切り取る必要が生ずる。また、経腸栄養剤保存容器の突出部807に系外の接続部材820を導入したときに、図8(c)に示すように、突出部807と系外の接続部材820との接触面に凸部819による隙間aができるため、経腸栄養剤や水が漏れるおそれがある。

【0050】また、本発明の挿入ガイド機構、特に取出口を開口させるための機構(開口化機構)としては、上記実施形態に限定されるものではなく、例えば、図1に示す凸部(ないし凹部)を形成する代わりに、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの熱印加部ないし高周波印加部が形成されていてもよい。この場合にも、該熱印加部ないし高周波印加部は、熱硬化ないし熱架橋されて材質強度が異なるようになり、凸部(ないし凹部)と同様の働きをすることができる。同様に材質の強度を変えるものとしては、図3(A)~(C)に示すように、下部切り込み部317よりも本体側の突出部307に、該突出部307の軸線Lに直交する面内に延びるよう

に、少なくとも1つの短冊状のシート状物321が外接(ないし内接)されていてもよい。好ましくは、該シート状物321の中央部323を薄くし、両端部325を厚くすることで、図3(B)の矢印で示す向きに押すことで、図3(C)に示すような開口状態を顕著に生じさせることができるものである。さらに、取出口を開口させるための機構(開口化機構)としては、図4に示すように、突出部407の経腸栄養剤流路部427に開口化部材429が保持されていてもよい。この場合の開口化部材429は、系外の接続部材を導入するまでは突出部407にあり、開口状態を保持することができものであれば、特に制限されるものではなく、図4(A)、(C)、(D)に示すように、経腸栄養剤流路部427に少なくとも一部が内接する(好ましくは全周面部がびつたりと当接する)形状を有するの開口化部材429を用いることができ、具体的には、図4(A)に示すように、中空の円筒(中空パイプ)形状の開口化部材、図4(C)に示すように、中実の略球状の形状ないしラグビーボール状の形状の開口化部材、図4(D)に示すように中実の円柱逆円錐台形状(逆テーパ状の逆切頭円錐形状)の開口化部材などを利用することができる。該開口化部材429は、図4

(A)及び(B)に示すように円柱形状のように中空のものにあつては、突出部407に(例えば、流路部に突起物を設けてこれにより係止させるなどの方法により)固定化させ、該中空部を経腸栄養剤流路部として利用することもできる。この場合には、図4(A)に示すように当該中空部内径に対応する外径を有する外径も持つ接続部材420を用いる必要がある。一方、図4(C)や(D)に示すように、中実の円柱パイプまたは中実の球状物等の場合には、固定化してもよいほか、固定化することなく、系外の接続部材420を導入する際に、該接続部材420により突かれて、突出部407の経腸栄養剤流路部427から外れて、経腸栄養剤保存容器の本体側に押し出される。この場合には、開口化部材429が、経腸栄養剤流路を塞がないように経腸栄養剤よりも比重を軽くし、浮き上がるようにすることもできるほか、さらに、図4(C)及び(D)に示すように、当該開口化部材429が未開封時に設置されている経腸栄養剤流路部427上部に突出部側から保存容器本体側に向けて拡張するように逆テーパを設けておき、開口化部材429が突出部側には下らない構造にしてもよい。なお、本発明における取出口を開口させるための機構としては、上述したものに限定されるものではなく、従来既知の開口化機構を適宜採用することができる事は言うまでもない。

【0051】また、本発明の挿入ガイド機構は、上記取出口を開口させるための構造以外の他の実施形態として、例えば、図5に示すように、下部切り込み部517より切り裂いて突出部の先端(下端)の周縁封止部515を切り取って取出口を開封する時に短冊状のシート状物527(例えば、PET(ポリエチレンテレフタレート))

製)の先端部528が該取出口(切り口)よりも外側に出るように、該突出部507の軸線方向に延びるように、該シート状物527の一部が下部切り込み部517よりも本体側の突出部507の内面に固定されていてもよい。この場合には、該シート状物527の先端部528がガイドの役割を果たし、これに沿って系外の接続部材をスムーズに挿入することができるものである。なお、本発明における挿入ガイド機構としては、上述したものに限定されるものではなく、従来既知の挿入ガイド機構を適宜採用することができる事は言うまでもない。

【0052】また、本発明の容器側の挿入ガイド機構では、さらに、上記取出口を開口させるための構造の他の実施形態として、例えば、リブが切り込み部よりも本体側の突出部の内面に形成されていても良い。この場合には、挿入ガイド機能の他に、系外の接続部材を導入した際に、該リブにより系外の接続部材を保持でき、かつ確実にシールすることができるものである。こうしたリブ(突出部)や図1に示す凹凸部は、容器本体シートと一体的に成形しても良いが、シートの片側に突出部や凹凸形状を作ったシート材を、容器本体を張り付けて作るための2枚のシート材の内側に張り合わせた後に、容器本体用のシート材を融着等により張り付けて製造してもよい。

【0053】また、容器本体の周縁封止部のうち、容器本体下部から突出部に至る周縁封止部は、広く(幅を厚く)して補強することが望ましい。これは、使用時に被術者が動くなどして保存容器が引っ張られたりした場合に、当該部分が捻れたりするなどの形態変化を起こしやすく、これにより取出口が狭められたり塞がれたりすることが生じ得るおそれがあるためである。

【0054】また、本発明の経腸栄養剤保存容器は、前記取出口を含む前記突出部の横幅が、加熱滅菌処理によるねじれを防止し得るように広く形成されていることを特徴とするものである。

【0055】図9は、本発明のソフトバック式の経腸栄養剤保存容器の取出口を含む前記突出部の横幅が、加熱滅菌処理によるねじれを防止し得るように広く形成されているものの代表的な一実施形態を表す概略図である。

【0056】図9(a)に示すように、本実施形態のソフトバック式の経腸栄養剤保存容器901の取出口を含む前記突出部907の横幅は、加熱滅菌処理によるねじれを防止し得るように広く形成されている。具体的には、前記取出口を含む前記突出部907の横幅が、下記式

$$2 \leq y/x \leq 6, \text{好ましくは}, 3 \leq y/x \leq 5$$

(ここで、xは図9(a)に示すように、取出口を含む前記突出部の横幅であり、yは図9(a)に示すように、経腸栄養剤保存容器本体の横幅である。)を満足するように広く形成されていることが望ましい。上記式で  $2 > y/x$  の場合には、特に問題はないが、これに接続させる接続部材が大きなものとなり、取り扱いが不便で

あるほか、接続時の取出口面積が大きくなり細菌等が侵入する危険性が大きくなるほか、万一、接続部材が抜けおりた場合、大量の内容物が流れ出すため、被術者の安全性の観点から好ましくない。一方、上記式で  $y/x > 6$  の場合には、加熱滅菌処理によるねじれを防止することが困難となり、接続部材を取り付け難く、取り付け後に、内容物がねじれにより生じた皺に沿って漏れ出す場合があるため好ましくない。

【0057】さらに、好ましくは、図9(a)に示すように、経腸栄養剤保存容器本体と突出部との間の周縁封止部は、ゆるやかなスロープ状にすることが望ましく、図9(b)に示すように、こうしたスロープ状にせずいきなりその横幅を狭めるのは、加熱滅菌処理によるねじれを生じさせやすい。そのため、下記式

$$0.5 \leq z/x \leq 10,$$

好ましくは、 $0.7 \leq z/x \leq 5$ 、より好ましくは  $1 \leq z/x \leq 3$

(ここで、xは図9(a)に示すように、取出口を含む前記突出部の横幅であり、zは図9(a)に示すように、経腸栄養剤保存容器本体と突出部との間の高さである。)を満足するように経腸栄養剤保存容器本体と突出部との間の周縁封止部は、ゆるやかなスロープ状にすることが望ましい。

【0058】また、経腸栄養剤保存容器901の取出口を含む前記突出部907を上記の如く広く形成する場合には、該突出部の先端シール部よりも本体側の側面シール部に切り込み部を設けた構造とし、系外の接続部材を導入し易くするための挿入ガイド機構は設けなくとも良い。これは、前記突出部907を上記の如く広く形成することで、簡単に開口させることができ、かつ系外の接続部材を導入(挿入)することができるとする利点を有するからである。

【0059】次に、経腸栄養剤保存容器901の取出口を含む前記突出部を上記の如く広く形成する場合には、これに対応する接続部材を用いることが望ましい。すなわち、対応する接続部材の一端が経腸栄養剤保存容器の広く形成された取出口を含む前記突出部に接合し得る構造を有し、接続部材の他端が経腸栄養補給用チューブまたは経腸栄養カテーテルと接続し得る構造を有することを特徴とするものである。

【0060】図10は、本発明のソフトバック式の経腸栄養剤保存容器の取出口を含む前記突出部を上記の如く広く形成する場合に、これに対応する接続部材の代表的な一実施形態を表す概略図である。

【0061】図10に示すように、本実施形態の接続部材11は、口径の異なる2つの円筒体が接合した(繋がつた)形をしている。このうち口径の大きい円筒部13が前記経腸栄養剤保存容器の取出口を含む突出部に接合する側であり、この口径の大きい円筒部13側の先端部15が、開封された取出口に導入し易くするための挿入ガイド構

造となっていることが望ましい。前記挿入ガイド構造としては、口径の大きい円筒部13の先端部15が、斜めにカットされた（竹を斜めに割った形に切断された）挿入開口部17を有するものである。また、口径の大きい円筒部13の中程の外周囲には、接続する際につかみやすく、また接続後に内容物の液漏れおよび抜け落ちを防止する目的で、リブ（凹凸部）23やフランジなどが適当数設けられていても良いし、外周囲表面を粗面処理してもよい。また、口径の大きい円筒部13側の先端部15は、先端に行くほどその口径が緩やかに狭まっていても良い。こうすることにより、より開封した取出口に素早く挿入することができるためである。一方、口径の小さい円筒部19は、経腸栄養補給用チューブまたは経腸栄養カテーテルと接続し得る側であり、こうしたチューブに挿入しやすいように、その先端部21は、絞ってあることが好ましい。また、口径の異なる円筒部を接合した（繋げた）形にするには、成形加工しれば、簡単に製造できるが、口径の異なる円筒部の境界部分は強度的に弱く、折れやすいため、特に口径の小さい円筒部は、肉厚を大きくしたり、スロープを設けて応力集中を避け折れ難くしても良い。

【0062】また、上記接続部材は、経腸栄養剤保存容器の取出口との接続部より内容物がにじみ出すのを防止し得る材料で、形成または表面処理されていることが望ましい。ここで、経腸栄養剤保存容器の取出口との接続部より内容物がにじみ出すのを防止し得る材料としては、疎水性樹脂であれば良いが、例えば、ポリエチレンテレフタレート、四フッ化エチレン樹脂（テフロン：米国のデュポン社の商品名）、ABS樹脂（アクリロニトリル、ブタジエン、スチレンを共重合もしくはブレンドして得られる丈夫な熱可塑性樹脂）等が挙げられる。また、こうした疎水性樹脂を表面処理する場合には、その基材には、親水性樹脂を用いてもよく、表面を破水性処理（例えば、親水性樹脂による表面被覆処理など）すればよい。

【0063】次に、本発明の経腸栄養剤保存容器用の接続部材の他の実施の形態としては、上述したソフトバック式の経腸栄養剤保存容器の開封後の取出口に導入し易くための挿入ガイド構造部、および挿入後に接続部材が取出口から脱落するのを防止するための脱落防止構造部が設けられてなることを特徴とするものである。

【0064】本発明の経腸栄養剤保存容器用の接続部材側の挿入ガイド構造部としては、特に制限されるものではなく従来公知の挿入ガイド構造を適当に利用することができるが、好ましくは、前記容器開封後の取出口の断面形状に適合するように扁平した断面楕円形状の挿入部であることが望ましい。これは、本発明の容器開封後の取出口は、上述したようにねじ切り式のキャップ等のものを用いることなく、容器本体と一体的に形成されているため、その断面形状が扁平した断面楕円形状を有して

いる。従って、既存の経腸栄養剤保存容器用の接続部材のように、挿入部の断面形状が円形状をしている場合には、適合性が悪くなり、気密性が十分に保持できないため、取出口の両端から内容物が漏れだしてしまったり、接続部材が抜け落ちたりするなどの問題が生じる。そのため、接続部材の挿入部の断面形状も扁平した断面楕円形状に形成することが望ましいものである。ただし、接続部材のうち、経腸栄養補給用チューブに接続される側の挿入部は、従来と同様に断面形状が円形状をしていることが望ましい。

【0065】また、本発明の経腸栄養剤保存容器用の接続部材側の脱落防止構造部としては、特に制限されるものではなく従来公知の脱落防止構造を適当に利用することができるが、好ましくは、接続部材の前記容器開封後の取出口への挿入部の外周上に設けられてなる鉢巻き状の突出部であることが望ましい。特に、図1に示すように容器側の突出部の内面に凹凸形状が設けられている場合には、かかる凹凸形状に適合する突出部形状とするのが望ましい。

【0066】なお、本発明のソフトバック式の経腸栄養剤保存容器に使用する事のできる材料に関しては、レトルト処理することができ、四季を通じて寒暖差の厳しい条件下でも十分に長期保存ができるように、耐熱性、耐寒性、熱変動性などの特性に優れ、かつ高周波シールや熱シールができ、また加工性、切る方向への指向性を付与された材料であれば特に制限されるものではなく、従来既知のレトルトバッグ用に開発された材料等の中から適宜選択して使用する事ができるものであり、例えば、アルミまたは $\text{SiO}_2$ 蒸着のポリエステル—ナイロン—CCPの三層構造物、ナイロン—アルミまたは $\text{SiO}_2$ 蒸着のポリエステル—ナイロン—CCPの四層構造物等が例示できる。

【0067】また、本発明のソフトバック式の経腸栄養剤保存容器は、消化態、半消化態以外の濃厚な栄養剤や流動食（これらの栄養剤や流動食には抗生物質等の薬剤を含んでいてもよい）などの経腸栄養剤、並びに飲料水（さらにこれに適当な水溶性のビタミンC等の栄養剤や抗生物質等の薬剤等を溶解したものであってもよい）などの飲料用水溶液を、順々に被術者に挿通した経腸栄養補給用チューブ（経鼻的または経皮的に用いる経腸栄養カテーテル）、さらに必要に応じて、栄養点滴セット（経腸栄養剤保存容器への接続部材、接続ゴム、点滴筒、ローラ・クランプ等を有する輸液セットなど）を通じて補給する際に用いられるものである。また、従来の上部開放型の注ぎ口付濃厚流動食専用容器のように、その都度、経腸栄養剤を調整する必要がないように、安全に長期間の保存が可能で、緊急性を要するような場合、さらには、今後の高齢化により自宅や介護施設で高度医療を受けた後に適切に経腸栄養剤を補給させる必要性が生じた場合などにも好適に対応できるものである。

【0068】本発明のソフトバック式の経腸栄養剤保存容器の製法に関しては、何ら制限を受けるものではなく、従来既知のソフトバック式の保存容器の製造技術を適宜利用して製造することができる。例えば、2枚のフィルムを重ね合わせて適当な金型で打ち抜き、周縁封止部（第1封止部と第2封止部にそれぞれの内容物を注入するために該容器を横向きに倒置した状態で上部側にくる位置に未融着部分をそれぞれ残しておくのが望ましい）となる部分を熱ないし高周波等により溶融接着した後、該容器を横向きに倒置した状態で第1封止部と第2封止部に未融着部分よりそれぞれの内容物を入れ、内容物を注入するために残しておいた未融着部分を熱ないし高周波等により溶融接着し、その後、加熱滅菌することにより、本発明のソフトバック式の保存容器を作ることができる。さらに必要に応じて、支持用の穴や切り込み部、さらにはシート状物等の挿入ガイド機構を適当な時期に形成することができる。ここで、容器下部の突出部に設ける切り込み部は、フィルムの成形時に延伸方向が横手方向（＝切る方向）となるようにして製造しておくことで、切る方向の指向性が製造時に付与されるため、該切り込み部から極めて簡単に切るとる事ができる。

【0069】

【発明の効果】（1） 本発明のソフトバック式の経腸栄養剤保存容器は、本体上部にレトルト保存用の第1封止部と使用時に異物や菌の侵入防止用の第2封止部が形成されてなり、本体下部に未使用保証構造の取出口を有する突出部が形成されてなるものであるため、水分補給後にも異物や菌の侵入を防止することができ、また、内容物の液漏れの生じない。

【0070】（2） 上記（1）のソフトバック式の経腸栄養剤保存容器において、前記第1封止部と第2封止部の間に切り込み部を設けてなるため、上記（1）に記載の作用効果を奏するほか、簡単に切るとることができ、消毒したハサミ等を準備しなくても良いとする利点がある。

【0071】（3） 上記（1）または（2）のソフトバック式の経腸栄養剤保存容器において、前記内側の第2封止部が、開閉自在なジッパー式のシール構造を有するため、上記（1）～（2）に記載の作用効果を奏するほか、飲料水を注ぐ作業が簡単で確実に行うことができ、水分等の飲料水補給時の異物や菌の侵入を最小限に抑える事ができるほか、水分等の飲料水補給後の異物や菌の侵入も完全に防止できるとする利点を有する。また、経腸栄養剤を被術者に補給後に、飲料水（さらにこれに適当な水溶性のビタミンC等の栄養剤や抗生物質等の薬剤等を溶解したものであってもよい）などの飲料用水溶液を、該第1封止部をその都度開閉することにより何度かに分けて補給させることもできる。

【0072】（4） 上記（1）または（2）のソフトバック式の経腸栄養剤保存容器において、前記内側の第

2封止部が、栄養分保存容器本体に一端が支持された弾性基部片とその先端に設けられた落下菌や異物の侵入を防止する弁体部位とからなる構造を有するため、上記

（1）～（2）に記載の作用効果を奏するほか、水を注ぐ作業が簡単で確実に行うことができるとする利点を有する。

【0073】（5） 上記（1）～（4）のいずれか1つのソフトバック式の経腸栄養剤保存容器において、上部に設けられた2重の封止部は、栄養分保存容器に封入された内容物を前記取出口より取り出した後に、前記第1封止部と第2封止部の間を切断して、内側の第2封止部を開いて水分を注ぎ込んだ後、該第2封止部を閉じて、異物や菌の侵入を防止すべく形成されているため、上記（1）～（4）に記載の作用効果と同様の効果を奏することができる。

【0074】（6） 上記（1）～（5）のいずれか1つのソフトバック式の経腸栄養剤保存容器において、前記突出部に形成された取出口の未開封保証構造が、該突出部の外周縁部がシールされ、該突出部の先端シール部よりも本体側の側面シール部に切り込み部を設けた構造によって構成されているため、上記（1）～（5）に記載の作用効果を奏することができるほか、従来の取出口の未開封保証構造のように複雑な構造（取出口に融着されたキャップをネジ切る必要のある未開封保証構造）を要し、本体と材質の異なるこれら取出口部材とを接着させる手間も必要なく、極めて簡便に製造できかつ液漏れの心配のないものであるとする利点を有する。

【0075】（7） 上記（1）～（6）のいずれか1つのソフトバック式の経腸栄養剤保存容器において、前記突出部には、開封された取出口に系外の接続部材を導入し易くするための挿入ガイド機構が設けられてなるため、上記（1）～（6）に記載の作用効果を奏することができるほか、取出口を開封した後に、系外の接続部材を取出口に挿入する際に手間取ることなく素早く挿入作業を完了でき、当該取出口からの異物や菌の侵入を防止することができるほか、挿入に手間取ること、内容液が噴き出したり、取出口が破れたり、めくれたりして液漏れをしたりすることもあり得るなど、作業上のトラブルが生じやすい作業であるため、こうした心配をしなくて良く、挿入作業を行う医療関係者に敬遠されることもなく、また精神的な負担も軽減できる。

【0076】（8） 上記（7）のソフトバック式の経腸栄養剤保存容器において、前記挿入ガイド機構が、取出口を開口させるための機構であるため、上記（1）～（6）に記載の作用効果を奏することができるほか、上記（7）に記載の作用効果を達成する上で極めて簡便な手段であるため、特にその効果に優れる。

【0077】（9） 上記（8）のソフトバック式の経腸栄養剤保存容器において、前記取出口を開口させるための機構として、切り込み部よりも本体側の突出部に、

該突出部の軸線に直交する面内に延びるように、少なくとも1つの凸部ないし凹部が形成されているものであり、上記(1)～(8)に記載の作用効果を奏することができるが、とりわけ、上記(7)～(8)の作用効果が顕著であり、当該達成手段の中でも極めて有用な手段の1つであると言える。

【0078】(10) 上記(8)のソフトバック式の経腸栄養剤保存容器において、前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つの熱印加部ないし高周波印加部が形成されているものであり、上記(1)～(8)に記載の作用効果を奏することができるが、とりわけ、上記(7)～(8)の作用効果が顕著であり、当該達成手段の中でも極めて有用な手段の他の1つであると言える。

【0079】(11) 上記(8)のソフトバック式の経腸栄養剤保存容器において、前記取出口を開口させるための構造として、前記切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つのシート状物が外接されているものであり、上記(1)～(8)に記載の作用効果を奏することができるが、とりわけ、上記(7)～(8)の作用効果が顕著であり、当該達成手段の中でも極めて有用な手段のさらに他の1つであると言える。

【0080】(12) 上記(8)のソフトバック式の経腸栄養剤保存容器において、前記取出口を開口させるための構造として、開口化部材が、少なくとも系外の接続部材を導入するまでは突出部の経腸栄養剤流路部に保持されているものであり、上記(1)～(8)に記載の作用効果を奏することができるが、とりわけ、上記(7)～(8)の作用効果が顕著であり、当該達成手段の中でも極めて有用な手段のさらにまた他の1つであると言える。

【0081】(13) 上記(7)のソフトバック式の経腸栄養剤保存容器において、前記挿入ガイド機構として、取出口の開封時にシート状物の先端部が該取出口よりも外側に出るように、該突出部の軸線方向に延びるように、該シート状物の一部が切り込み部よりも本体側の突出部の内面に固定されているため、上記(1)～(6)に記載の作用効果を奏することができるほか、上記(7)に記載の作用効果を達成する上で極めて簡便な他の1つの手段であるため、特にその効果に優れる。

【0082】(14) 上記(8)のソフトバック式の経腸栄養剤保存容器において、前記挿入ガイド機構として、切り込み部よりも本体側の突出部の内面にリブが形成されているため、上記(8)に記載の作用効果に加えて、系外の接続部材を導入した際に、該リブにより系外の接続部材を保持でき、かつ確実にシールすることができるものである。

【0083】(15) 上記(1)～(14)のソフト

バック式の経腸栄養剤保存容器において、前記取出口を含む前記突出部の横幅が、広く形成されていることにより、上記(1)～(14)に記載の作用効果を奏することができるほか、加熱滅菌処理による取出口を含む前記突出部のねじれを防止し得るとする特有の作用効果を奏するものである。

【0084】(16) 上記(15)のソフトバック式の経腸栄養剤保存容器において、前記取出口を含む前記突出部の横幅が、下記式  $2 \leq y/x \leq 6$  (ここで、 $x$ は取出口を含む前記突出部の横幅であり、 $y$ は経腸栄養剤保存容器本体の横幅である。)を満足するように広く形成されていることにより、上記(1)～(15)に記載の作用効果を奏することができるほか、特に上記(15)の加熱滅菌処理による取出口を含む前記突出部のねじれを防止し得るとする特有の作用効果がより顕著に得られるものである。

【0085】(17) 本発明の接続部材は、一端が上記(15)または(16)のソフトバック式の経腸栄養剤保存容器の取出口に接合し得る構造を有し、他端が経腸栄養補給用チューブまたは経腸栄養カテーテルと接続し得る構造を有することにより、簡単な操作により両者を接続することができる。

【0086】(18) 上記(17)の接続部材において、前記ソフトバック式の経腸栄養剤保存容器の取出口を含む突出部に接合する側の先端部が、開封された取出口に導入し易くするための挿入ガイド構造となっていることにより、前記経腸栄養剤保存容器の取出口を開封した後に、当該接続部材を取出口に挿入する際に手間取ることなく素早く挿入作業を完了でき、当該取出口からの異物や菌の侵入を防止することができるほか、挿入に手間取ること、内容液が噴き出したり、取出口が破れたり、めくれたりして液漏れをしたりすることもあり得るなど、作業上のトラブルが生じやすい作業であるため、こうした心配をしなくて良く、挿入作業を行う医療関係者に敬遠されることもなく、また精神的な負担も軽減できる。

【0087】(19) 上記(18)の接続部材において、前記挿入ガイド構造が、斜めに切断された挿入開口部を有することにより、上記(18)の作用効果のうち、特に当該接続部材を取出口に挿入する際に手間取ることなく素早く挿入作業を完了でき、当該取出口からの異物や菌の侵入を防止できるとする効果がより顕著に得られるものである。

【0088】(20) 上記(17)～(19)の接続部材において、前記ソフトバック式の経腸栄養剤保存容器の取出口との接続部より内容物がにじみ出すのを防止し得る材料で、形成または表面処理されていることにより、上記(17)～(19)の作用効果のうち、特に内容液が噴き出したり、液漏れをしたりするのを防止することができるという効果がより顕著に得られるものであ



る。

【0089】(21) 本発明の経腸栄養剤保存容器用の接続部材は、上記(1)～(16)のソフトバック式の経腸栄養剤保存容器の開封後の取出口に導入し易くための挿入ガイド構造部、および挿入後に接続部材が取出口から脱落するのを防止するための脱落防止構造部が設けられてなることにより、前記経腸栄養剤保存容器の取出口を開封した後に、当該接続部材を取出口に挿入する際に手間取ることなく素早く挿入作業を完了でき、当該取出口からの異物や菌の侵入を防止することができるほか、挿入に手間取ること、内容液が噴き出したり、取出口が破れたり、めくれたりして液漏れをしたりすることもあり得るなど、作業上のトラブルが生じやすい作業であるため、こうした心配をしなくて良く、挿入作業を行う医療関係者に敬遠されることもなく、また精神的な負担も軽減できる。

【0090】(22) 上記(21)の接続部材において、前記挿入ガイド構造部が、前記容器開封後の取出口の断面形状に適合するように扁平した断面楕円形状の挿入部であることにより、上記(18)の作用効果のうち、特に当該接続部材を取出口に挿入する際に手間取ることなく素早く挿入作業を完了でき、当該取出口からの異物や菌の侵入を防止できるとする効果がより顕著に得られるものである。

【0091】(23) 上記(21)または(22)の接続部材において、前記脱落防止構造部が、接続部材の前記容器開封後の取出口への挿入部の外周上に設けられてなる鉢巻き状の突出部であることにより、上記(21)または(22)効果がより顕著に得られるものである。

#### 【図面の簡単な説明】

【図1】 本発明のソフトバック式の経腸栄養剤保存容器の代表的な一実施形態を表す概略図である。図1(A)は、ソフトバック式の経腸栄養剤保存容器の全体の表す概略図である。図1(B)は、図1(A)の経腸栄養剤保存容器の突起部の軸線に直交する面内に延びるように凸部を形成する箇所(A-A'線)の断面拡大断面である。図1(C)は、図1(A)の経腸栄養剤保存容器の突出部に示す破線に沿って切り裂く(＝開封する)ことで、突出部に形成された取出口(当該破線の位置に作られる切り口)の断面拡大断面である。図1

(D)は、図1(C)の経腸栄養剤保存容器の突出部に形成された取出口の両側より、矢印で示すように押して取出口が開いた状態を表す取出口の断面拡大断面である。図1(E)は、図1(A)の経腸栄養剤保存容器の突起部の軸線に直交する面内に延びるように凸部を形成しなかった場合に、経腸栄養剤保存容器の突出部に示す破線に沿って切り裂く(＝開封する)ことで、突出部に形成された取出口をその両側より、矢印で示すように押した場合に、開口されずに取出口全体が曲がってしまっ

た状態を表す取出口の断面拡大断面である。

【図2】 本発明のソフトバック式の経腸栄養剤保存容器の上部構造の代表的な他の一実施形態を表す概略図であって、栄養分保存容器本体に一端が接着支持された弾性基部片とその先端に設けられた落下菌や異物の侵入を防止する弁体部位とからなる構造を有する第2封止部およびその近傍を表す部分断面図である。

【図3】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部の代表的な他の一実施形態を表す概略図であって、該突出部の挿入ガイド機構として、切り込み部よりも本体側の突出部に、該突出部の軸線に直交する面内に延びるように、少なくとも1つのシート状物が外接されてなる取出口を開口させるための機構(開口化機構)が設けられている当該突出部を表す概略図である。図3(A)は、開口化機構が設けられている当該突出部の全体を表す概略図である。図3(B)は、図3(A)の経腸栄養剤保存容器の突出部に示す破線に沿って切り裂く(＝開封する)ことで、突出部に形成された取出口(当該破線の位置に作られる切り口)の断面拡大断面である。図3(C)は、図3(B)の経腸栄養剤保存容器の突出部に形成された取出口の両側より、矢印で示すように押して取出口が開いた状態を表す取出口の断面拡大断面である。

【図4】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部の代表的なさらに他の一実施形態を表す概略図である。図4(A)、(C)、(D)は、経腸栄養剤保存容器下部の突出部の挿入ガイド機構として、突出部の経腸栄養剤流路部に開口化部材(図4(A)は中空の円筒形状の開口化部材、図4(C)は中実の略球状ないしラグビーボール形状の開口化部材、図4(D)は逆テーパを有するの中実の円柱形状の開口化部材)が保持されてなる取出口を開口させるための機構(開口化機構)が設けられている当該突出部、さらに図4(A)では、対応する系外の接続部材を表す概略図である。図4(B)は、図4(A)に使われている開口化部材を表す概略図である。

【図5】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部の代表的なさらにまた他の一実施形態を表す概略図である。図5(A)は、経腸栄養剤保存容器下部の突出部の挿入ガイド機構として、該突出の軸線方向に延びるように、シート状物の一部が切り込み部よりも本体側の突出部の内面に固定されてなる機構が設けられている当該突出部を表す概略図である。図5(B)は、図5(A)の経腸栄養剤保存容器の突出部に示す破線に沿って切り裂いた(＝開封した)状態(シート状物の先端部が該取出口(切り口)よりも外側に出た状態)を表す概略図である。

【図6】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部(図6(A))及び対応する系外の接続部材(図6(B))の代表的な一実施形態を表す概略図

である。

【図7】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部（図7（A））及び対応する系外の接続部材（図7（B））の代表的な他の一実施形態を表す概略図である。

【図8】 本発明のソフトバック式の経腸栄養剤保存容器下部の突出部（図8（A））及び対応する系外の接続部材（図8（B））の代表的な他の一実施形態を表す概略図であり、図8（C）は、図8（B）の系外の接続部材を図8（A）のソフトバック式の経腸栄養剤保存容器下部の突出部に導入した（差し込んだ）状態での、図8（A）の経腸栄養剤保存容器の突起部の軸線に並行して面内に延びるように凸部を形成した箇所（A-A'線）の断面拡大断面である。

【図9】 本発明のソフトバック式の経腸栄養剤保存容器の取出口を含む前記突出部の横幅が、加熱滅菌処理によるねじれを防止し得るように広く形成されているものの代表的な一実施形態を表す概略図であり、図9（a）は、経腸栄養剤保存容器本体と突出部との間の周縁封止部をゆるやかなスロープ状にしたものであり、図9（b）は、こうしたスロープ状にせずいきなりその横幅を狭めたものである。

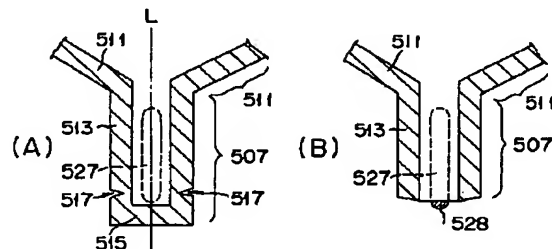
【図10】 本発明のソフトバック式の経腸栄養剤保存容器の取出口を含む前記突出部を上記の如く広く形成する場合に、これに対応する接続部材の代表的な一実施形態を表す概略図であり、図10（a）は口径の異なる円筒部を単に接合した（繋げた）形のものであり、図10（b）は口径の異なる円筒部をスロープを設けて滑らかに接合した（繋げた）形のものである。

#### 【付号の説明】

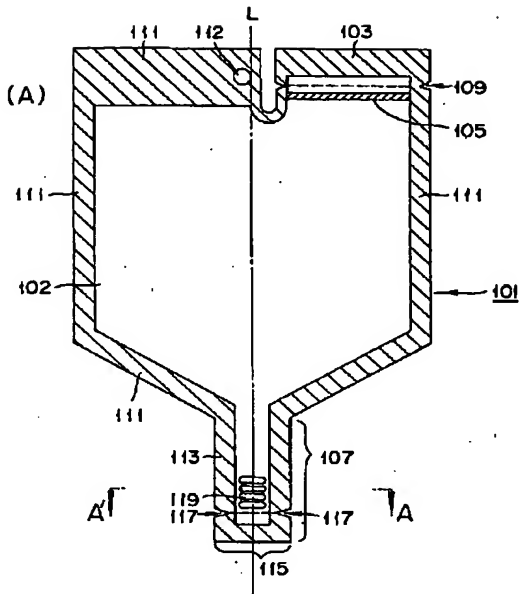
101…ソフトバック式の経腸栄養剤保存容器、102…栄養分保存容器本体、103…第1封止部、105…第2封止部、107…突出部、109…上部切り込み部、111…周縁封止部、112…支持用穴、113…突出部の両サイドの周縁封止部、115…突出部の先端（下端）の周縁封止部、117…下部切り込み部、119…開口化機能を持つ凸部、202…栄養分保存容器本体、203…第1封止部、205…第2封止部、207…弾性

基部片、209…弁体部、307…突出部、311…周縁封止部、313…突出部の両サイドの周縁封止部、315…突出部の先端（下端）の周縁封止部、317…下部切り込み部、317…下部切り込み部、321…短冊状のシート状物、23…シート状物の中央部、325…シート状物321の両端部、407…突出部、411…周縁封止部、413…突出部の両サイドの周縁封止部、415…突出部の先端（下端）の周縁封止部、417…下部切り込み部、420…系外の接続部材、427…経腸栄養剤流路部、429…開口化部材、507…突出部、511…周縁封止部、513…突出部の両サイドの周縁封止部、515…突出部の先端（下端）の周縁封止部、517…下部切り込み部、527…短冊状のシート状物、528…短冊状のシート状物の先端部、607…突出部、611…周縁封止部、613…突出部の両サイドの周縁封止部、615…突出部の先端（下端）の周縁封止部、617…下部切り込み部、619…開口化機能を持つ凸部、620…系外の接続部材、707…突出部、711…周縁封止部、713…突出部の両サイドの周縁封止部、715…突出部の先端（下端）の周縁封止部、717…下部切り込み部、719…開口化機能を持つ凸部、720…系外の接続部材、811…周縁封止部、813…突出部の両サイドの周縁封止部、815…突出部の先端（下端）の周縁封止部、817…下部切り込み部、819…開口化機能を持つ凸部、820…系外の接続部材、a…隙間部分、901…経腸栄養剤保存容器、902…栄養分保存容器本体、907…突出部、911…周縁封止部、913…突出部の両サイドの周縁封止部、915…突出部の先端（下端）の周縁封止部、917…下部切り込み部、x…取出口を含む前記突出部の横幅、y…経腸栄養剤保存容器本体の横幅、z…経腸栄養剤保存容器本体と突出部との間の高さ、11…接続部材、13…口径の大きい円筒部、15…口径の大きい円筒部側の先端部、17…斜めにカットされた挿入開口部、19…口径の小さい円筒部、21…口径の小さい円筒部側の先端部、23…リップ（凸部）。

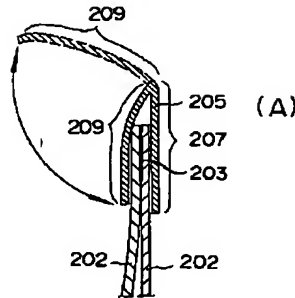
【図5】



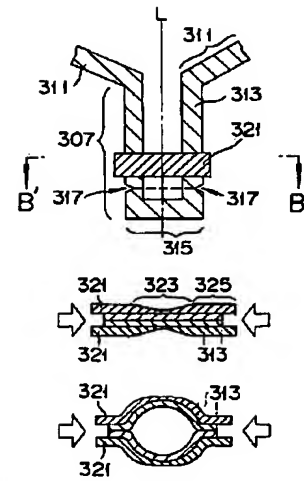
【図1】



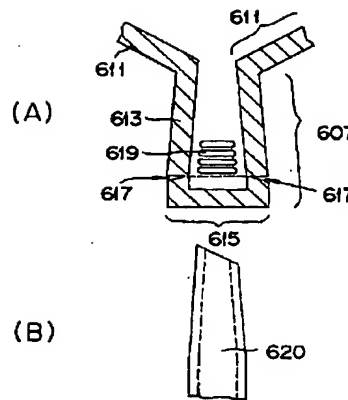
【図2】



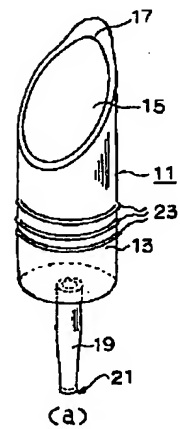
【図3】



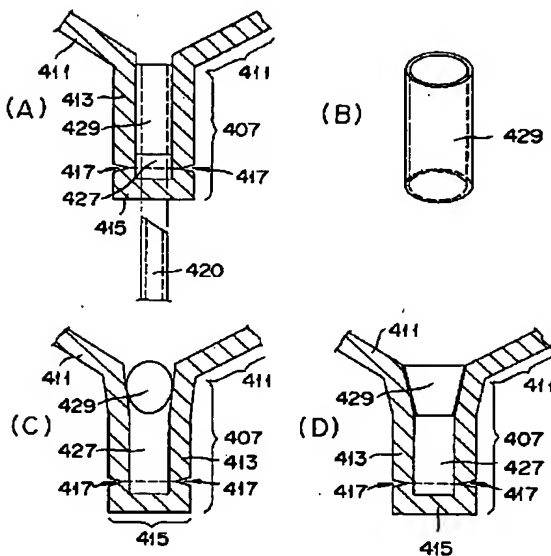
【図6】



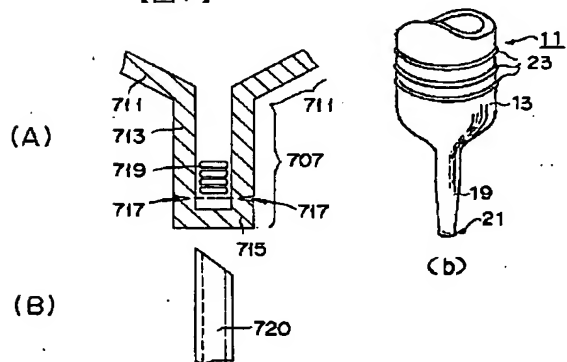
【図10】



【図4】

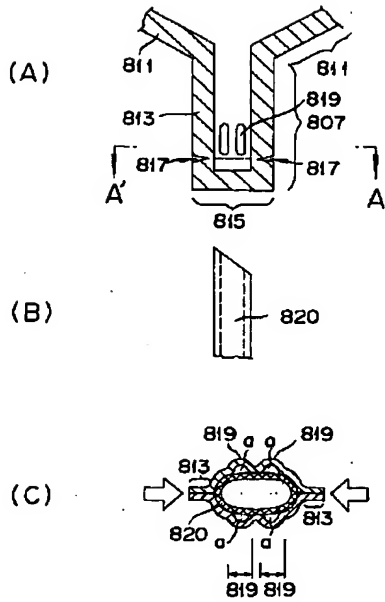


【図7】

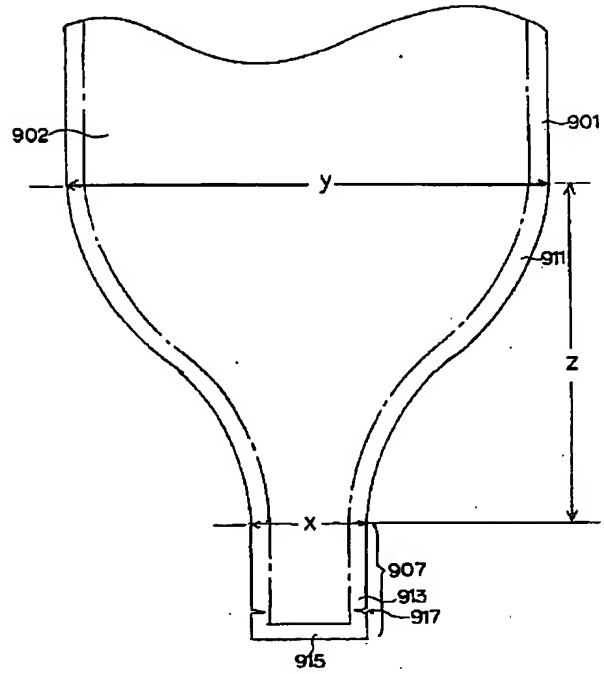




【図8】



【図9】



JAPANESE

[JP,2000-152975,A]

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CLAIMS DETAILED DESCRIPTION TECHNICAL FIELD PRIOR ART EFFECT OF THE INVENTION TECHNICAL  
PROBLEM MEANS DESCRIPTION OF DRAWINGS DRAWINGS

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[Translation done.]

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**CLAIMS**


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## [Claim(s)]

[Claim 1] The enteral-hyperalimentation-drug preservation container of the software back type characterized by coming to form the lobe which it comes to form the 2nd closure section for invasion prevention of a foreign matter and a bacillus in the upper part of a body at the time of the 1st closure section for retort preservation, and use, and has output port of intact guarantee structure in the body lower part.

[Claim 2] The enteral-hyperalimentation-drug preservation container according to claim 1 characterized by cutting deeply between said 1st closure sections and 2nd closure sections, and coming to prepare the section.

[Claim 3] The enteral-hyperalimentation-drug preservation container according to claim 1 or 2 characterized by the 2nd closure section of said inside having the seal structure of the zipper type which can be opened and closed freely.

[Claim 4] The enteral-hyperalimentation-drug preservation container according to claim 1 or 2 characterized by having the structure which consists of a valve element part where the 2nd closure section of said inside prevents invasion of the fall bacillus thru/or foreign matter prepared at the piece of the elastic base where the end was supported by the body of a nutrient preservation container, and its tip.

[Claim 5] The closure section of the duplex prepared in the upper part cuts between said 1st closure sections and 2nd closure sections, after taking out the contents enclosed with the nutrient preservation container from said output port. An enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-4 characterized by closing this 2nd closure section and being formed that invasion of a foreign matter thru/or a bacillus should be prevented after opening the inside 2nd closure section and pouring in moisture.

[Claim 6] An enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-5 to which the seal of the periphery edge of this lobe is carried out, and unopened guarantee structure of the output port formed in said lobe is characterized by the tip seal sections of this lobe being consisted of by the structure which cut deeply in the side-face seal section by the side of a body, and prepared the section.

[Claim 7] An enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-6 characterized by coming to prepare the insertion guide device for making the connection member besides a system easy to introduce in the opened output port at said lobe.

[Claim 8] The enteral-hyperalimentation-drug preservation container according to claim 7 characterized by said insertion guide device being a device for carrying out opening of the output port.

[Claim 9] The enteral-hyperalimentation-drug preservation container according to claim 8 characterized by forming at least one heights thru/or a crevice in the lobe by the side of a body rather than the slitting section as a device for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[Claim 10] The enteral-hyperalimentation-drug preservation container according to claim 8 characterized by forming at least one heat impression section thru/or the RF impression section in the lobe by the side of a body rather than said slitting section as structure for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[Claim 11] The enteral-hyperalimentation-drug preservation container according to claim 8 characterized by circumscribing at least one sheet-like object to the lobe by the side of a body rather than said slitting section as structure for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[Claim 12] The enteral-hyperalimentation-drug preservation container according to claim 8 characterized by holding an opening-ized member as structure for carrying out opening of said output port at the enteral-hyperalimentation-drug passage section of a lobe until it introduces the connection member besides a system at least.

[Claim 13] The enteral-hyperalimentation-drug preservation container according to claim 7 characterized by for these some sheet-like objects cutting deeply and being fixed to the inside of the lobe by the side of a body rather than the section as said insertion guide device so that the point of a sheet-like object may come out outside this output port at the time of opening of output port, and it may extend in the direction of an axis of this lobe.

[Claim 14] The enteral-hyperalimentation-drug preservation container according to claim 8 characterized by forming the rib in the inside of the lobe by the side of the body of a container rather than the slitting section as said insertion guide device.

[Claim 15] An enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-14 characterized by being widely formed so that the breadth of said lobe including said output port can prevent torsion by heat sterilization processing.

[Claim 16] An enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-15 characterized by forming widely the breadth of said lobe including said output port so that following type 2  $2 \leq y/x \leq 6$  (x is the breadth of said lobe including output port here, and y is the breadth of the body of an enteral-hyperalimentation-drug preservation container.) may be satisfied.

[Claim 17] The connection member characterized by having the structure which an end can join to the output port of an enteral-hyperalimentation-drug preservation container according to claim 15 or 16, and having the structure which the other end can connect with the tube for enteral feeding supply, or an enteral feeding catheter.

[Claim 18] The connection member according to claim 17 characterized by the point of the side joined to a lobe including the output port of said enteral-hyperalimentation-drug preservation container having insertion guide structure for making it easy to introduce into the opened output port.

[Claim 19] The connection member according to claim 17 to which said insertion guide structure is characterized by having insertion opening cut aslant.

[Claim 20] A connection member given in any 1 term of claims 17-19 characterized by formation or carrying out surface treatment with the ingredient which can prevent that contents begin to bleed from a connection with the output port of an enteral-hyperalimentation-drug preservation container.

[Claim 21] The connection member for enteral-hyperalimentation-drug preservation containers characterized by coming to prepare the omission prevention structured division for preventing that a connection member falls out from output port after the insertion guide structured division of a sake, and insertion that it is easy to introduce into the output port after opening of an enteral-hyperalimentation-drug preservation container given in any 1 term of claims 1-16.

[Claim 22] The connection member according to claim 21 characterized by being the cross-section elliptical insertion section in which said insertion guide structured division carried out flat so that the cross-section configuration of the output port after said container opening might be suited.

[Claim 23] The connection member according to claim 21 or 22 characterized by said omission prevention structured division being a lobe of the shape of a headband which it comes to prepare on the periphery of the insertion section to the output port after said container opening of a connection member.

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[Translation done.]

JAPANESE

[JP,2000-152975,A]

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the enteral-hyperalimentation-drug preservation container of a new software back type. The tube for enteral feeding supply which inserts enteral hyperalimentations drug, such as thick nutrients other than digestive voice and half-digestive voice, and liquid food, in a way-ed person in more detail (enteral feeding catheter used pernasality-wise or endermically), In case it furthermore supplies through nutrition intravenous drip sets (infusion set which has the connection member to an enteral-hyperalimentation-drug preservation container, connection rubber, an intravenous drip cylinder, a roller clamp, etc.) if needed, it is related with the enteral-hyperalimentation-drug preservation container of a software back type used.

[0002]

[Description of the Prior Art] The tube for enteral feeding supply which inserts enteral hyperalimentations drug, such as thick nutrients other than current, digestive voice, and half-digestive voice, and liquid food, in a way-ed person (enteral feeding catheter used pernasality-wise or endermically), further -- the need -- responding -- a nutrition intravenous drip set (the connection member to an enteral-hyperalimentation-drug preservation container --) As a typical thing of the enteral-hyperalimentation-drug preservation container used in case it supplies through the infusion set which has connection rubber, an intravenous drip cylinder, a roller clamp, etc., the container only for high density liquid diets with a tap of an up open sand mold is used. In this container only for high density liquid diets with a tap It inserts carrying out the monitor of the X-ray reception section in which the catheter chosen according to the symptom of the way-ed person of each, such as a pernasal enteral feeding catheter, etc. through the extension tube joined by the liquid food output port established in the lower part of this container was formed by the point of this catheter into the stomach from a way-ed person's nose and opening. Liquid food is slushed into the stomach from two or more holes prepared near the point of this catheter. It pours distributively in the container [ finishing / disinfection of the thick (high nutrition) liquid food adjusted to table setting 30 quota \*\* every meal / as operating which considered hospital infection prevention of the high density liquid diet using the container only for high density liquid diets with a tap of such an up open sand mold ] only for high density liquid diets with a tap. \*\* Since the high density liquid diet set on the table serves as a good culture medium to bacteria, it carries out impregnation initiation immediately. A finger is washed and contamination is prevented. \*\* When not pouring in at once, seal a residue immediately and it carries out heat insulation. Neglect at a room temperature is avoided. \*\* When using a residue, pour in by making it optimal temperature with the microwave oven of a ward. \*\* Return the exclusive cop after impregnation to lower \*\*\*\*. Don't leave it in a sickroom. \*\* Although production use of the enteral feeding pharmaceutical preparation is carried out in each ward, this is also the hotbed of contamination and handling takes it cautions. \*\* Without carrying out additional administration, if impregnation is completed once (daily dose needed for a way-ed person), use the container only for high density liquid diets with a tap of an up open sand mold after disinfecting. Suppose that the disinfection uses Milton liquid or 50 time TEGO 51 liquid 80 times, it drives out air so that the inside may also be disinfected, and it gives it for 1 hour or more. In addition, hard system resin mold goods are used so that this container only for high density liquid diets may be disinfected and a reuse can be carried out.

[0003] In addition, the lid which fits into this tap is increasingly attached in the tap of the container only for high density liquid diets with a tap free [ attachment and detachment ] in order to prevent a hospital infection. And in case the high density liquid diet of predetermined capacity is poured distributively according to a way-ed person's condition of disease etc., and except in case [ in order to perform hydration (there is also the purpose which dilutes and supplies completely

further the high density liquid diet which remains inside a container to a way-ed person) to a way-ed person after supplying this high density liquid diet, ] potable water is poured out from a tap, a tap is in the condition of it having been equipped with the lid concerned and having closed.

[0004] However, with the container only for high density liquid diets with a tap of such an up open sand mold, in case a liquid food container is filled with a high density liquid diet or potable water, it is necessary to pour in the high density liquid diet and potable water which the nurse etc. removed the lid and adjusted to containers, such as an exclusive cop, being cautious of the graduation given to this container only for high density liquid diets so that it may become requirements according to a doctor's prescription. Therefore, during this impregnation (distributive pouring) actuation, since the foreign matter and bacillus in air invade, an aseptic condition in equipment can never be held, but the opportunity of bacillus impregnation increases from contamination [ tap ] etc. Moreover, the hand was disinfected to whenever [ the ] on the need that a nurse etc. performs such actuation manually, and the glove and the mask needed to be carried out, it needed to carry out carefully, and the burden to a nurse etc. was large. Moreover, the liquid food and potable water which are poured into the container only for high density liquid diets were also also that to which it is necessary to adjust each time, and the burden to a chef etc. is large, and also it becomes cost quantity, and a patient's health care cost burden increases.

[0005] Then, mixing of the hospital infection by invasion of the bacillus to the container only for high density liquid diets or a foreign matter is prevented, and it considers as the container in which retort preservation is possible so that sterilization processing may be carried out beforehand and an enteral hyperalimentation drug can be saved, and the enteral-hyperalimentation-drug preservation container of the software bag type which established unopened guarantee structure so that it could be guaranteed [ still more nearly unopened ] to output port is used increasingly.

[0006] With the enteral-hyperalimentation-drug preservation container of such a conventional software back type, after carrying out specified quantity enclosure of the enteral hyperalimentation drug, sterilization processing is carried out for 121 degree-Cx 30 minutes. And contents are in an aseptic condition, the member for enteral-hyperalimentation-drug fetch made of rigid resin which has enteral-hyperalimentation-drug output port attached in the lower part of this body of an enteral-hyperalimentation-drug preservation container is equipped with the cap (unopened certification structure) for proving the justification of these contents, safety, etc., this cap tends to be separated and unstopped at the time of use, and it is going to guarantee a sterile system by connecting a connection tube to this.

[0007] However, in order to have carried out hydration, it needed to cut with the scissors which disinfected the upper part of the enteral-hyperalimentation-drug preservation container of this software back type, and potable water needed to be poured in with suitable transfer pipet from this cut end. Therefore, after cutting the upper part of an enteral-hyperalimentation-drug preservation container, the present condition is once that have opened this cut end wide, and there are many opportunities of invasion of the bacillus from this open section, and a hospital infection and fear of foreign matter mixing remain.

[0008] Moreover, the member for enteral-hyperalimentation-drug fetch made of hard system resin which has this enteral-hyperalimentation-drug output port usually carries out melting adhesion by the heat seal, and is attached in the body of an enteral-hyperalimentation-drug preservation container made of elasticity system resin. It compares with the seal part of the periphery edge of a body in the heat seal of these different-species quality of the materials. Sufficient bond strength is hard to be obtained and further by an external load (especially sterilization processing) being added at the time of subsequent migration conveyance and handling etc. at the time of enclosure of contents, or sterilization processing Seal condition sufficient in a part for jointing of the member for enteral-hyperalimentation-drug fetch and the body of an enteral-hyperalimentation-drug preservation container was not maintained, but there was a problem it was presupposed that contents begin to leak from a part for the jointing concerned.

[0009]

[Problem(s) to be Solved by the Invention] Then, the purpose of this invention offers the enteral-hyperalimentation-drug preservation container of a software back type which can prevent invasion of a foreign matter or a bacillus also after hydration, and the liquid spill of contents does not produce in the enteral-hyperalimentation-drug preservation container of a software back type in view of the above-mentioned trouble.

[0010]

[Means for Solving the Problem] It is preparing the closure structure of a duplex in the upper part this invention persons' attaining the above-mentioned purpose, as a result of examining wholeheartedly the enteral-hyperalimentation-drug preservation container of a software back type. Since invasion of a foreign matter or a bacillus can be effectively prevented also after hydration, while being able to perform prevention of a hospital infection Since there is no variation in

strong and fixed bond strength can be secured by forming output port using some bodies of an enteral-hyperalimentation-drug preservation container, in case seal adhesion is carried out, Within the limits of the external burden (for example, amount demanded by JIS etc.) to plan, it comes to complete this invention for the ability of the enteral-hyperalimentation-drug preservation container which does not start a liquid spill at all to be obtained based on a header and this knowledge.

[0011] That is, the purpose of this invention is attained by following the (1) - (23).

[0012] (1) The enteral-hyperalimentation-drug preservation container of the software back type characterized by coming to form the lobe which it comes to form the 2nd closure section for invasion prevention of a foreign matter and a bacillus in the upper part of a body at the time of the 1st closure section for retort preservation, and use, and has output port of intact guarantee structure in the body lower part.

[0013] (2) An enteral-hyperalimentation-drug preservation container given in the above (1) characterized by cutting deeply between said 1st closure sections and 2nd closure sections, and coming to prepare the section.

[0014] (3) The above (1) characterized by the 2nd closure section of said inside having the seal structure of the zipper type which can be opened and closed freely, or an enteral-hyperalimentation-drug preservation container given in (2).

[0015] (4) The above (1) characterized by having the structure which consists of a valve element part where the 2nd closure section of said inside prevents invasion of the fall bacillus thru/or foreign matter prepared at the piece of the elastic base where the end was supported by the body of a nutrient preservation container, and its tip, or an enteral-hyperalimentation-drug preservation container given in (2).

[0016] (5) The closure section of the duplex prepared in the upper part After taking out the contents enclosed with the nutrient preservation container from said output port, between said 1st closure sections and 2nd closure sections is cut. The enteral-hyperalimentation-drug preservation container of any one publication of above-mentioned (1) - (4) characterized by closing this 2nd closure section and being formed that invasion of a foreign matter thru/or a bacillus should be prevented after opening the inside 2nd closure section and pouring in moisture.

[0017] (6) said -- a lobe -- forming -- having had -- output port -- unopened -- a guarantee -- structure -- this -- a lobe -- a periphery -- a edge -- a seal -- carrying out -- having -- this -- a lobe -- a tip -- a seal -- the section -- a body -- a side -- a side face -- a seal -- the section -- cutting deeply -- the section -- having prepared -- structure -- constituting -- having -- \*\*\*\* -- things -- the description -- \*\* -- carrying out -- the above -- (-- one --) - (-- five --) -- some -- one -- a \*\* -- a publication -- an enteral hyperalimentation drug -- preservation -- a container .

[0018] (7) The enteral-hyperalimentation-drug preservation container of any one publication of above-mentioned (1) - (6) characterized by coming to prepare the insertion guide device for making the connection member besides a system easy to introduce in the opened output port at said lobe.

[0019] (8) An enteral-hyperalimentation-drug preservation container given in the above (7) characterized by said insertion guide device being a device for carrying out opening of the output port.

[0020] (9) An enteral-hyperalimentation-drug preservation container given in the above (8) characterized by forming at least one heights thru/or a crevice in the lobe by the side of a body rather than the slitting section as a device for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[0021] (10) An enteral-hyperalimentation-drug preservation container given in the above (8) characterized by forming at least one heat impression section thru/or the RF impression section in the lobe by the side of a body rather than said slitting section as structure for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[0022] (11) An enteral-hyperalimentation-drug preservation container given in the above (8) characterized by circumscribing at least one sheet-like object to the lobe by the side of a body rather than said slitting section as structure for carrying out opening of said output port so that it may extend in the field which intersects perpendicularly with the axis of this lobe.

[0023] (12) An enteral-hyperalimentation-drug preservation container given in the above (8) characterized by holding an opening-ized member as structure for carrying out opening of said output port at the enteral-hyperalimentation-drug passage section of a lobe until it introduces the connection member besides a system at least.

[0024] (13) An enteral-hyperalimentation-drug preservation container given in the above (7) characterize by for these some sheet-like objects cut deeply and be fix to the inside of the lobe by the side of a body rather than the section as said insertion guide device so that the point of a sheet-like object may come out outside this output port at the time of opening of output port, and it may extend in the direction of an axis of this lobe.

[0025] (14) An enteral-hyperalimentation-drug preservation container given in the above (8) characterized by forming the



rib in the inside of the lobe by the side of the body of a container rather than the slitting section as said insertion guide device.

[0026] (15) The enteral-hyperalimentation-drug preservation container of any one publication of above-mentioned (1) - (14) characterized by being widely formed so that the breadth of said lobe including said output port can prevent torsion by heat sterilization processing.

[0027] (16) The enteral-hyperalimentation-drug preservation container of any one publication of the breadth of said lobe including said output port of following type 2  $\leq y/x \leq$  above-mentioned [ which is characterized by being widely formed so that 6 (x is the breadth of said lobe including output port here, and y is the breadth of the body of an enteral-hyperalimentation-drug preservation container) may be satisfied ] (1) - (15).

[0028] (17) The connection member characterized by having the structure which an end can join to the output port of an enteral-hyperalimentation-drug preservation container the above (15) or given in (16), and having the structure which the other end can connect with the tube for enteral feeding supply, or an enteral feeding catheter.

[0029] (18) A connection member given in the above (17) characterized by the point of the side joined to a lobe including the output port of said enteral-hyperalimentation-drug preservation container having insertion guide structure for making it easy to introduce into the opened output port.

[0030] (19) A connection member given in the above (18) said whose insertion guide structure is characterized by having insertion opening cut aslant.

[0031] (20) an enteral hyperalimentation drug -- preservation -- a container -- output port -- a connection -- contents -- bleeding -- taking out -- a thing -- preventing -- obtaining -- an ingredient -- formation -- or -- surface treatment -- carrying out -- having -- \*\*\*\* -- things -- the description -- \*\* -- carrying out -- the above -- (-- 17 --) - (-- 19 --) -- some -- one -- a \*\* -- a publication -- connection -- a member .

[0032] (21) The above (1) Connection member for enteral-hyperalimentation-drug preservation containers characterized by coming to prepare the omission prevention structured division for preventing that a connection member falls out from output port after the insertion guide structured division of a sake, and insertion that it is easy to introduce into the output port after opening of the enteral-hyperalimentation-drug preservation container of any one publication of - (16).

[0033] (22) A connection member given in the above (21) characterized by being the cross-section elliptical insertion section in which said insertion guide structured division carried out flat so that the cross-section configuration of the output port after said container opening might be suited.

[0034] (23) The above (21) characterized by said omission prevention structured division being a lobe of the shape of a headband which it comes to prepare on the periphery of the insertion section to the output port after said container opening of a connection member, or a connection member given in (22).

[0035]

[Embodiment of the Invention] The enteral-hyperalimentation-drug preservation container of the software back type of this invention is characterized by coming to form the lobe which it comes to form the 2nd closure section for invasion prevention of a foreign matter and a bacillus in the upper part of a body at the time of the 1st closure section for retort preservation, and use, and has output port of intact guarantee structure in the body lower part.

[0036] Below, the gestalt of operation of this invention is explained at a detail using a drawing.

[0037] Drawing 1 is a schematic diagram showing 1 typical operation gestalt of the enteral-hyperalimentation-drug preservation container of the software back type of this invention.

[0038] As shown in drawing 1 , the 2nd closure section 105 for invasion prevention of a foreign matter and a bacillus is formed in the upper part of a body at the time of the 1st closure section 103 for retort preservation, and use, and the lobe 107 which has output port of intact guarantee structure (opening structure is included) in the body lower part is formed in the enteral-hyperalimentation-drug preservation container 101 of the software back type of this operation gestalt.

[0039] Moreover, the up slitting section 109 is formed between said 1st closure sections 103 and 2nd closure sections 105. Along with the broken line shown all over drawing, it can tear apart in parallel in the 2nd closure section 105 by this, and the upside 1st closure section 103 can be removed.

[0040] In addition, the periphery closure section 111 for retort preservation covering the perimeter edge which is open for free passage to the 1st closure section 103 for retort preservation of seal structure and this by which crossed the 1st closure section 103 for retort preservation to the perimeter edge of a body including the upper part of a body in the upper part of a body, for example, melting adhesion was carried out with the heat seal or the RF seal is formed. Moreover, it is the upper part of a container body among the periphery closure sections 111 for retort preservation, and it is desirable to

make the hole 112 for hanging and supporting this enteral-hyperalimentation-drug preservation container 101 on a hook etc. in the axis of the closure section 111 in which the closure sections 103 and 105 of the above-mentioned duplex are not formed thru/or its near. That is, although the closure sections 103 and 105 of the above-mentioned duplex may be formed over the whole from the edge of the upper part of a container body to an edge, the hole 112 for support can be formed, and it be also functional that water stop rather in the range which be extent which can be poured in easily, and it be excellent [ thing ], considering the point which can stop invasion of a foreign matter or a bacillus to the minimum at the time of opening.

[0041] Moreover, the 2nd closure section 105 by this embodiment has the seal structure (the structure same with being used with the food preservation bag with a zipper "a zip lock" (trademark) as seal structure of the zipper type which can be opened and closed freely can be illustrated.) of the zipper type which can be opened and closed freely. The enteral hyperalimentation drug which is the contents within a body 111 by forming the 2nd closure section 105 concerned from output port For example, although the upper part of the enteral-hyperalimentation-drug preservation container of a software back type was cut and moisture was conventionally poured in after supplying a way-ed person through a nutrition intravenous drip set (infusion set) and an enteral feeding tube (catheter) In this embodiment, as point \*\* was carried out, along with the broken line shown all over drawing, it tears apart in parallel in the 2nd closure section 105. That what is necessary is to remove the upside 1st closure section 103, to open the 2nd closure section 105 concerned, and just to pour in required moisture here after impregnation Since the sensibility which closed as certainly [ it is easy and quick and ] as putty putty the 2nd closure section 105 of the zipper type concerned with a finger, and was sealed at the feel of a fingertip is known, there is no failure to shut and invasion of future foreign matters or a bacillus can be prevented. In addition, the container (bag) which has the seal structure of the zipper type which can be opened and closed, and which is the 2nd closure section 105 by this embodiment Form the film which prepares the slot of the suitable magnitude for the position of the \*\*\*\* roll which extends and rolls round this film by the film forming cycle, and has heights, and it is made the same. The film which has a crevice corresponding to these heights can be formed, and these can be piled up, it can pierce with suitable metal mold, and the container (bag) which has the seal structure of the zipper type which can open and close desired can be made from carrying out melting adhesion of the periphery section by the heat seal. Moreover, as described above, even if it does not manufacture the container (bag) which has the seal structure of the zipper type which can be freely opened and closed in one, a body part and the upper part of a body which has the seal structure of the zipper type in which the closing motion concerned is free are manufactured separately, melting adhesion is carried out by heat thru/or high frequency, etc., it may be made to unify later, and a desired container (bag) may be manufactured. under the present circumstances, since the directivity of the direction (direction shown in drawing 1 with a broken line) to cut is given from the slitting section at the time of manufacture, it can cut by manufacturing, as the extension direction turns into a longitudinal direction of this zipper very easily (in addition, this was prepared in the lobe of the body lower part mentioned later – it can cut deeply and can carry out similarly in the section.).

[0042] In addition, it cannot be overemphasized that a limit cannot be received at all and it can manufacture about the manufacture approach with the enteral-hyperalimentation-drug preservation container of this invention, combining the manufacturing technology of the conventional known suitably.

[0043] in addition, in this invention, even if it is in considering as other operation gestalten as show said 2nd closure section besides the above-mentioned operation gestalt to drawing 2 4, the desired end can be attained.

[0044] That is, as shown in drawing 2 , the 2nd closure section 205 as other embodiments of this invention has the structure where an end becomes the body 202 of a nutrient preservation container from the piece 207 of an elastic base in which adhesion support was carried out by heat welding etc., and the valve element part 209 which prevents invasion of the fall bacillus and foreign matter which were prepared at the tip. If this valve element part 209 can be raised upwards with the piece 207 of an elastic base as the starting point and it detaches as the broken line of drawing 2 shows, it will return to the original condition (condition of the valve element part 209 shown as the continuous line of drawing 2 ). Therefore, after raising this valve element part 209 after cutting off the 1st closure section 203 by which the closure was carried out so that the retort preservation by which welding was carried out with heat thru/or a RF seal, etc. may be possible, and pouring in moisture, the closure (prevention) of the invasion (especially invasion of a fall bacillus or a foreign matter) of a foreign matter or a bacillus can be carried out by returning to the original condition.

[0045] In this invention, in addition, the closure section of the duplex prepared in the upper part After taking out not the thing limited to what is shown in the above-mentioned operation gestalt but the contents enclosed with the nutrient preservation container from output port, between said 1st closure sections and 2nd closure sections is cut. This 2nd

closure section is closed, and after opening the inside 2nd closure section and pouring in moisture, if it is formed so that invasion of a foreign matter or a bacillus can be prevented, it is not restricted especially, and the closure structure of the conventional known can be chosen suitably and can be used.

[0046] Next, as unopened guarantee structure of the output port formed in said lobe 107, the seal of the periphery edge 113 of this lobe 107 is carried out, and it is constituted by the structure which formed the lower slitting section 117 in the side-face seal welding section by the side of the body 102 of a container rather than the tip seal section 115 of this lobe 107. That is, output port (cut end made by the location of the broken line concerned) can be formed in a lobe 107 by what is torn apart from the lower slitting section 117 along with the broken line shown in the lobe 107 of drawing 1 (= it opens). Therefore, if unopened, output port (cut end) is not formed but the safety of contents is guaranteed. On the other hand, after tearing apart, can close the opening section and it cannot be returned, but the intact nature of non-opened contents is also guaranteed.

[0047] Furthermore, it is desirable to prepare the device for carrying out opening of the insertion guide device for making the connection member besides a system easy (plug) to introduce into the opened output port (cut end formed at the time of opening), especially the output port in said lobe in this invention. As said output port is shown in drawing 1 (A) and drawing 1 (B), and (the cross-section enlarged drawing which met the A-A' line of drawing 1) as a device for carrying out opening in this embodiment Rather than the slitting section 117, at least one heights [ 2-5 ] (four pieces are illustrated in drawing 1) (or crevice) 119 are preferably formed in the lobe 107 by the side of a body 102 so that it may extend in the field which intersects perpendicularly with the axis L of this lobe 107. In the condition (= it opened) of having torn apart by establishing this structure along with the broken line shown in a lobe 107 It is pushing in the direction of the arrow head shown in the cross-section enlarged drawing which the output port (cut end) concerned changed into the condition of having closed, and met the A-A' line of drawing 1 (B) at the case by the thumb and the index finger, as shown in drawing 1 (C). Without being bent by the whole like drawing 1 (E) since the force can go in the direction which carries out opening certainly, as shown in drawing 1 (D), output port (cut end) can be changed into an opening condition. Furthermore, although heights (or crevice) can also be formed in this invention so that it may extend in a field in parallel in the axis L of this lobe 107 By forming heights (or crevice) so that it may extend in the field which intersects perpendicularly with the axis L of this lobe 107 Also when doing so the effectiveness which make it hard to flow out contents liquid when the connection member besides a system is introduced, and also tearing apart from the slitting section, these heights (or crevice) carry out the role like a guide, and have the advantage which can be torn apart along with heights (or crevice) to \*\*.

[0048] Moreover, you may make it the shape of toothing, and a taper so that it may be hard to escape after introducing the connection member besides a system into the interior of the enteral-hyperalimentation-drug passage of a lobe (it inserted). Namely, the connection member besides many systems by which current marketing is carried out For example, as shown in drawing 6, as shown in the connection member 620 besides the system aslant cut so that it might be easy to introduce into the output port (cut end) of the lobe 607 of an enteral-hyperalimentation-drug preservation container, and drawing 7, the point of the shape of a (1) abbreviation taper-like cylindrical shape (2) There is a connection member 720 besides the system aslant cut so that it might be easy to introduce into the output port (cut end) of the lobe 707 of an enteral-hyperalimentation-drug preservation container the point of the shape of a straight cylindrical shape which has not formed especially the taper etc. therefore, in the lobe of the enteral-hyperalimentation-drug preservation container corresponding to the connection member besides such a system There are many inner skin of the enteral-hyperalimentation-drug passage of this lobe and peripheral faces of the connection member besides a system about the contact surface, and without desorbing the connection member besides [ a lobe to ] a system from the connection member besides a system using \*\*\*\*\*, a lobe so that a liquid spill can be prevented For example, as are shown in drawing 6 and it is shown in that from which the configuration of the lobe 607 (especially enteral-hyperalimentation-drug passage) when introducing the connection member 620 besides (1) system turns into the shape of an abbreviation inverse tapered shape-like cylindrical shape, and drawing 7 (2) The configuration of the lobe 707 (especially enteral-hyperalimentation-drug passage) when introducing the connection member 720 besides a system does not have especially a taper, and turns into the shape of a straight thing cylindrical shape.

[0049] Furthermore, although heights 819 (or crevice) can also be formed in this invention so that it may extend in a field in parallel in the axis L of a lobe 807 as shown in drawing 8 In this case, since it tears apart as the heights used as a guide show drawing 6 and 7 and is not prepared in a line in parallel, when tearing apart from the slitting section 817, In case it tears, will tear apart and the force will not be able to join a line easily in parallel, and will carry out the work like [ in case heights (or crevice) 819 tear apart rather ] a guide, and it will be torn apart in parallel by these heights (or crevice) 819. Do

not become a beautiful cut end, therefore a liquid spill arises, and also in being severe, there is a possibility that even a body may reach and end \*\*\*\* may stop becoming useful, and the need of cutting off carefully using the scissors disinfected specially arises. Moreover, since the clearance a by heights 819 is made in the contact surface of a lobe 807 and the connection part 820 besides a system as shown in drawing 8 (c) when the connection part 820 besides a system is introduced into the lobe 807 of an enteral-hyperalimentation-drug preservation container, there is a possibility that an enteral hyperalimentation drug and water may leak.

[0050] moreover, as a device (opening-ized device) for carrying out opening of the insertion guide device of this invention, especially the output port So that it may extend rather than said slitting section in the field which intersects perpendicularly with the axis of this lobe at the lobe by the side of a body instead of forming not the thing limited to the above-mentioned operation gestalt but the heights (or crevice) shown in drawing 1 At least one heat impression section thru/or the RF impression section may be formed. Also in this case, a bridge is heat-hardened thru/or heat constructed, and quality-of-the-material reinforcement comes to differ, and this heat impression section thru/or the RF impression section can carry out the same work as heights (or crevice). As what changes the reinforcement of the quality of the material similarly, as shown in drawing 3 (A) - (C), the sheet-like object 321 of the shape of at least one strip of paper may be circumscribed to the lobe 307 by the side of a body rather than the lower slitting section 317, so that it may extend in the field which intersects perpendicularly with the axis L of this lobe 307 (or inscribed). An opening condition as shown in drawing 3 (C) can be notably produced by pushing on the sense shown by the arrow head of drawing 3 (B) by making thin the center section 323 of this sheet-like object 321, and thickening both ends 325 preferably. Furthermore, as output port is shown in drawing 4 as a device (opening-ized device) for carrying out opening, the opening-ized member 429 may be held at the enteral-hyperalimentation-drug passage section 427 of a lobe 407. It is not what is in a lobe 407 until the opening-ized member 429 in this case introduces the connection member besides a system, can hold an opening condition, and will be especially restricted if it is a thing. The having-configuration (perimeter surface part contacts exactly preferably) in which at least part is inscribed in the enteral-hyperalimentation-drug passage section 427 opening-ized member 429 as shown in drawing 4 (A), (C), and (D) can be used. As are shown in drawing 4 (A), and shown in the opening-ized member of a cylinder (hollow pipe) configuration in the air, and drawing 4 (C), specifically the abbreviation for a solid -- as shown in the spherical opening-ized member of the configuration of the shape of a configuration thru/or a Rugby ball, and drawing 4 (D), the opening-ized member of the cylinder reverse truncated-cone configuration (inverse tapered shape-like reverse truncated cone configuration) of a solid etc. can be used. If this opening-ized member 429 is one of things in the air like the shape of a cylindrical shape as shown in drawing 4 (A) and (B), a lobe 407 can be made to be able to fix it (for example, the approach of preparing a projection in the passage section and making it stop etc. by this), and it can also use this centrum for it as the enteral-hyperalimentation-drug passage section. In this case, it is necessary to use the connection member 420 also with the outer diameter which has an outer diameter corresponding to the centrum bore concerned as shown in drawing 4 (A). On the other hand, as shown in drawing 4 (C) and (D), in case in the case of the cylinder pipe of a solid, or the spherical object of a solid you may fix and also the connection member 420 besides a system is introduced, without fixing, it pokes by this connection member 420, separates from the enteral-hyperalimentation-drug passage section 427 of a lobe 407, and extrudes at the body side of an enteral-hyperalimentation-drug preservation container. In this case, rather than an enteral hyperalimentation drug, specific gravity is made light and the opening-ized member 429 can come floating so that enteral-hyperalimentation-drug passage may not be taken up, and also further, as shown in drawing 4 (C) and (D), the inverse tapered shape is prepared so that the opening-ized member 429 concerned may expand the diameter towards the body side of a preservation container from a lobe side in the enteral-hyperalimentation-drug passage section 427 upper part currently installed at the time of unopened, and you may make it the structure where the opening-ized member 429 does not fall in a lobe side. In addition, it cannot be overemphasized that it is not limited to what was mentioned above as a device for carrying out opening of the output port in this invention, and the opening-ized device of the conventional known can be adopted suitably.

[0051] Moreover, as the above-mentioned output port is shown in drawing 5 as other operation gestalten of \*\* except the structure for carrying out opening, the insertion guide device of this invention When tearing apart from the lower slitting section 517, cutting off the periphery closure section 515 at the tip (lower limit) of a lobe and opening output port, the strip-of-paper-like sheet-like object 527 So that the point 528 of (the product [ for example, ] made from PET (polyethylene terephthalate)) may come out outside this output port (cut end) These some sheet-like objects 527 may be fixed to the inside of the lobe 507 by the side of a body rather than the lower slitting section 517 so that it may extend in the direction of an axis of this lobe 507. In this case, the point 528 of this sheet-like object 527 can play the role of a guide, and can

insert the connection member besides a system smoothly along with this. In addition, it cannot be overemphasized that it is not limited to what was mentioned above as an insertion guide device in this invention, and the insertion guide device of the conventional known can be adopted suitably.

[0052] Moreover, by the insertion guide device by the side of the container of this invention, as other operation gestalten of the structure for carrying out opening of the above-mentioned output port, a rib cuts deeply and it may be further formed in the inside of the lobe by the side of a body rather than the section. In this case, when the connection member besides a system other than an insertion guide function is introduced, the connection member besides a system can be held with this rib, and a seal can be carried out certainly. Although you may fabricate in one with the body sheet of a container, after the concave heights shown in such a rib (lobe) and drawing 1 make it rival inside the web material of two sheets for sticking the web material which made the shape of a lobe or toothing, and making the body of a container in one side of a sheet, they may stick the web material for the bodies of a container by welding etc., and may manufacture it.

[0053] Moreover, as for the periphery closure section from the body lower part of a container to a lobe among the periphery closure sections of the body of a container, it is desirable to make it large (for it to be about width of face), and to reinforce. gestalt change of the part concerned being twisted, when a way-ed person moves this at the time of use and a preservation container is pulled -- a lifting -- easy -- output port should be narrowed by this or be closed -- it is sufficient and carrying out may arise -- it rubs and is for \*\*\*\*\*.

[0054] Moreover, the enteral-hyperalimentation-drug preservation container of this invention is characterized by being widely formed so that the breadth of said lobe including said output port can prevent torsion by heat sterilization processing.

[0055] Drawing 9 is a schematic diagram showing 1 typical operation gestalt, although the breadth of said lobe including the output port of the enteral-hyperalimentation-drug preservation container of the software back type of this invention is widely formed so that torsion by heat sterilization processing can be prevented.

[0056] As shown in drawing 9 (a), the breadth of said lobe 907 including the output port of the enteral-hyperalimentation-drug preservation container 901 of the software back type of this operation gestalt is widely formed so that torsion by heat sterilization processing can be prevented. It is desirable following formula  $2 \leq y/x \leq 6$  and to specifically form preferably, the breadth of said lobe 907 including said output port widely so that  $3 \leq y/x \leq 5$  (it is here, x is the breadth of said lobe which includes output port as shown in drawing 9 (a), and y is the breadth of the body of an enteral-hyperalimentation-drug preservation container as shown in drawing 9 (a).) may be satisfied. Since there is especially no problem by the above-mentioned formula in  $2 > y/x$ , but the connection member connected to this will become big, the danger that handling is inconvenient, and also the output port area at the time of connection will become large, and bacteria etc. will invade becomes large, and also a lot of contents should flow out when a connection member falls out and it gets down, it is not desirable from a viewpoint of a way-ed person's safety. On the other hand, since in the case of  $y/x > 6$  it becomes difficult to prevent torsion by heat sterilization processing, it is hard to attach a connection member and contents may begin to leak to it after installation along with the wrinkle produced by torsion by the above-mentioned formula, it is not desirable.

[0057] Preferably, as shown in drawing 9 (a), it is desirable to make the periphery closure section between the body of an enteral-hyperalimentation-drug preservation container and a lobe into the shape of a loose slope, and as shown in drawing 9 (b), it is easy furthermore, to produce torsion by-heat sterilization processing to narrow the breadth suddenly, without making it the shape of such a slope. following type  $0.5 \leq z/x \leq 10$  [ therefore, ] -- preferably  $0.7 \leq z/x \leq 5$  -- more - - desirable --  $1 \leq z/x \leq 3$  (it is here, x is the breadth of said lobe which includes output port as shown in drawing 9 (a), and z is the height between the body of an enteral-hyperalimentation-drug preservation container, and a lobe, as shown in drawing 9 (a).) As for the periphery closure section between the body of an enteral-hyperalimentation-drug preservation container, and a lobe, it is desirable to make it the shape of a loose slope so that it may be satisfied.

[0058] Moreover, when forming widely like the above said lobe 907 including the output port of the enteral-hyperalimentation-drug preservation container 901, it is not necessary to consider as the structure which cut deeply in the side-face seal section by the side of a body, and prepared the section rather than the tip seal section of this lobe, and to establish the insertion guide device for making the connection member besides a system easy to introduce. This is because it has the advantage to which can be made to carry out opening simply by forming said lobe 907 widely like the above, and it is supposed that the connection member besides a system can be introduced (insertion).

[0059] Next, when forming widely like the above said lobe including the output port of the enteral-hyperalimentation-drug preservation container 901, it is desirable to use the connection member corresponding to this. That is, it is characterized by having the structure which can be joined to said lobe including the output port in which an enteral-hyperalimentation-

drug preservation container is large, and the end of a corresponding connection member was formed, and having the structure which the other end of a connection member can connect with the tube for enteral feeding supply, or an enteral feeding catheter.

[0060] Drawing 10 is a schematic diagram showing 1 typical operation gestalt of the connection member corresponding to this, when forming widely like the above said lobe including the output port of the enteral-hyperalimentation-drug preservation container of the software back type of this invention.

[0061] As shown in drawing 10, the connection member 11 of this operation gestalt has the form (connected) which two cylinder objects with which aperture differs joined. Among these, the body 13 with large aperture is the side joined to a lobe including the output port of said enteral-hyperalimentation-drug preservation container, and it is desirable for the point 15 by the side of the body 13 with this large aperture to have insertion guide structure for making it easy to introduce into the opened output port. As said insertion guide structure, the point 15 of the body 13 with large aperture has the insertion (cut by form where bamboo was broken aslant) opening 17 cut aslant. Moreover, in case it connects with the periphery enclosure in the middle of a body 13 where aperture is large, for a grip or the purpose which becomes empty and prevents the liquid spill and omission omission of contents after connection, suitable number \*\*\*\*\* also has a rib (concave heights) 23, a good flange, etc., and they may carry out surface roughening of the periphery enclosure front face. Moreover, the aperture may be gently narrow, so that the point 15 by the side of the body 13 with large aperture goes at a tip. By carrying out like this, it is because it can insert in the output port opened more quickly. On the other hand, the body 19 with small aperture is the side which can be connected with the tube for enteral feeding supply, or an enteral feeding catheter, and having extracted is desirable [ the body / the point 21 ] so that it may be easy to insert in such a tube. Moreover, you may make it hard to carry out fabrication and for \*\*\*\* and the boundary part of the body from which aperture differs although it can manufacture easily to be weak in reinforcement, and for the body especially with small aperture to enlarge thickness, or to prepare a slope, to avoid stress concentration, and to break, since it is easy to break in order to make it the form (it tied) which joined the body from which aperture differs.

[0062] Moreover, the above-mentioned connection member is the ingredient which can prevent that contents begin to bleed, and it is more desirable than a connection with the output port of an enteral-hyperalimentation-drug preservation container formation or to carry out surface treatment. Here, as an ingredient which can prevent that contents begin to bleed from a connection with the output port of an enteral-hyperalimentation-drug preservation container, although what is necessary is just hydrophobic resin, polyethylene terephthalate, tetrafluoroethylene resin (Teflon: trade name of Du Pont of the U.S.), ABS plastics (they are copolymerization or strong thermoplastics blended and obtained about acrylonitrile, a butadiene, and styrene), etc. are mentioned, for example. Moreover, when carrying out surface treatment of such hydrophobic resin, hydrophilic resin may be used for the base material, and amniorrhesis nature processing of the front face should just be carried out to it (for example, surface coating processing by hydrophilic resin etc.).

[0063] Next, that it is easy to introduce into the output port after opening of the enteral-hyperalimentation-drug preservation container of a software back type mentioned above as a gestalt of other operations of the connection member for the enteral-hyperalimentation-drug preservation containers of this invention, the omission prevention structured division for preventing that a connection member falls out from output port after the insertion guide structured division of a sake and insertion is prepared, and \*\*\*\* is characterized by things.

[0064] Although it is not restricted and well-known insertion guide structure can be conventionally used suitably especially as the insertion guide structured division by the side of the connection member for the enteral-hyperalimentation-drug preservation containers of this invention, it is desirable that it is the cross-section elliptical insertion section which carried out flat preferably so that the cross-section configuration of the output port after said container opening might be suited. Since the output port after container opening of this invention is formed in one with the body of a container, without twisting off as mentioned above, and using things, such as a cap of a formula, this has the cross-section elliptical in which the cross-section configuration carried out flat. Therefore, since compatibility worsens and airtightness cannot fully hold like the connection member for the existing enteral-hyperalimentation-drug preservation containers when the cross-section configuration of the insertion section is carrying out the circle configuration, the problem of a content block beginning to leak from the both ends of output port, or a connection member falling out arises. Therefore, it is desirable to form in the cross-section elliptical which carried out flat [ of the cross-section configuration of the insertion section of a connection member ]. However, as for the insertion section of the side connected to the tube for enteral feeding supply among connection members, it is desirable for the cross-section configuration to carry out the circle configuration as usual.

[0065] Moreover, although it is not restricted and well-known omission prevention structure can be conventionally used



suitably especially as the omission prevention structured division by the side of the connection member for the enteral-hyperalimentation-drug preservation containers of this invention, it is desirable preferably that it is the lobe of the shape of a headband which it comes to prepare on the periphery of the insertion section to the output port after said container opening of a connection member. As especially shown in drawing 1, when the shape of toothing is prepared in the inside section of the lobe by the side of a container, it is desirable to consider as the lobe configuration which suits in the shape of [ this ] toothing.

[0066] In addition, it is related with the ingredient which can be used for the enteral-hyperalimentation-drug preservation container of the software back type of this invention. So that it can retort and a mothball may fully be possible also under the severe conditions of a temperature difference through the four seasons It is not what will be restricted especially if it is the ingredient to which it excelled in properties, such as thermal resistance, cold resistance, and heat variability, and the RF seal and the heat seal were made and, to which workability and the directivity to the direction to cut were given. It is what that can use, choosing suitably from the ingredients developed for the retort bags of the conventional known. For example, aluminum or SiO<sub>2</sub> The three-layer structure of polyester-nylon-CCP of vacuum evaporatio, nylon-aluminum, or SiO<sub>2</sub> The four-layer structure of polyester-nylon-CCP of vacuum evaporatio etc. can be illustrated.

[0067] Moreover, the enteral-hyperalimentation-drug preservation container of the software back type of this invention Enteral hyperalimentations drug, such as thick nutrients other than digestive voice and half-digestive voice, and liquid food (drugs, such as an antibiotic, may be included in these nutrients and liquid food), In a list, drinking water solutions, such as potable water (drugs, such as nutrients, such as still more suitable, water-soluble vitamin C for this, and an antibiotic, etc. may be dissolved) The tube for enteral feeding supply inserted in the way-ed person one by one (enteral feeding catheter used pernasality-wise or endermically), It is a using-furthermore, thing in case it supplies through nutrition intravenous drip sets (infusion set which has the connection member to an enteral-hyperalimentation-drug preservation container, connection rubber, an intravenous drip cylinder, a roller clamp, etc.) if needed. Moreover, like the container only for high density liquid diets with a tap of the conventional up open sand mold, prolonged preservation is safely possible, and when the need of making an enteral hyperalimentation drug supplying appropriately [ after future aging receives altitude medicine further in a house or a nursing home ] when requiring urgency arises, it can respond suitably each time, so that it is not necessary to adjust an enteral hyperalimentation drug.

[0068] About the process of the enteral-hyperalimentation-drug preservation container of the software back type of this invention, a limit cannot be received at all and it can manufacture, using suitably the manufacturing technology of the preservation container of the software back type of the conventional known. For example, pile up the film of two sheets and it pierces with suitable metal mold. After carrying out melting adhesion of the part used as the periphery closure section (it is desirable to leave a non-welding part to the location to which it comes for an upper part side where this container is inverted sideways, respectively in order to pour each contents into the 1st closure section and the 2nd closure \*\*\*\*) by heat thru/or a RF, etc., Where this container is inverted sideways, each contents are put into the 1st closure section and the 2nd closure \*\*\*\* from a non-welding part. The preservation container of the software back type of this invention can be made by carrying out melting adhesion by heat thru/or high frequency, etc., and heat-sterilizing after that the non-welding part which it left in order to pour in contents. Furthermore, insertion guide devices, such as a sheet-like object, can be formed in the hole for support, the slitting section, and a pan at a suitable stage if needed. Here, the slitting section prepared in the lobe of the container lower part is that it manufactures at the time of shaping of a film as the extension direction turns into the direction of Yokote (= the direction to cut), and since the directivity of the direction to cut is given at the time of manufacture, it can be cut very easily from this slitting section.

[0069]

[Effect of the Invention] (1) since the enteral-hyperalimentation-drug preservation container of the software back type of this invention is a thing in which it comes to form the lobe which it comes to form the 2nd closure section for invasion prevention of a foreign matter and a bacillus in the upper part of a body at the time of the 1st closure section for retort preservation, and use, and has output port of intact guarantee structure in the body lower part -- after hydration -- invasion of a foreign matter or a bacillus -- it can prevent -- moreover, the liquid spill of contents -- not being generated .

[0070] (2) In the enteral hyperalimentation drug preservation container of the software back type of the above (1), since it cut deeply between said 1st closure sections and 2nd closure sections and come to prepare the section, the operation effectiveness of a publication be do so to the above (1), and also it can cut easily and there be an advantage to which it be suppose that it be necessary to prepare the sterilized scissors etc.

[0071] (3) Since the 2nd closure section of said inside has the seal structure of the zipper type which can be opened and

closed freely in the enteral-hyperalimentation-drug preservation container of the above (1) or the software back type of (2), The above (1) The operation effectiveness of a publication is done so to - (2), and also the activity which pours out potable water can be easy, it can carry out certainly, and invasion of the foreign matter at the time of the potable water supply of moisture etc. or a bacillus can be suppressed to the minimum, and also it has the advantage to which it is supposed that invasion of the foreign matter after the potable water supply of moisture etc. or a bacillus can also be prevented completely. Moreover, drinking water solutions, such as potable water (drugs, such as nutrients, such as still more suitable, water-soluble vitamin C for this, and an antibiotic, etc. may be dissolved), can also be made to divide and supply to a number of times by opened and closing this 1st closure section each time, after supplying an enteral hyperalimentation drug to a way-ed person.

[0072] (4) In the enteral-hyperalimentation-drug preservation container of the above (1) or the software back type of (2) Since the 2nd closure section of said inside has the structure which consists of a piece of the elastic base where the end was supported by the body of a nutrient preservation container, and a valve element part which prevents invasion of the fall bacillus and foreign matter which were prepared at the tip, The above (1) The operation effectiveness of a publication is done so to - (2), and also it has the advantage which the activity which pours out water presupposes it can be easy and can be carried out certainly.

[0073] (5) The above (1) in the enteral-hyperalimentation-drug preservation container of any one software back type of - (4), the closure section of the duplex prepared in the upper part After taking out the contents enclosed with the nutrient preservation container from said output port, between said 1st closure sections and 2nd closure sections is cut. After opening the inside 2nd closure section and pouring in moisture, this 2nd closure section is closed, and since it is formed that invasion of a foreign matter or a bacillus should be prevented, the operation effectiveness of a publication and the same effectiveness can be done so to above-mentioned (1) - (4).

[0074] (6) The above (1) In the enteral-hyperalimentation-drug preservation container of any one software back type of - (5) Since the unopened guarantee structure of the output port formed in said lobe is constituted by the structure which the seal of the periphery edge of this lobe was carried out, cut deeply in the side-face seal section by the side of a body rather than the tip seal section of this lobe, and prepared the section, The above (1) Can do the operation effectiveness of a publication so to - (5), and also complicated structure (unopened guarantee structure which has the screw \*\*\*\* need in the cap by which welding was carried out to output port) is required like the unopened guarantee structure of conventional output port. It has the advantage it is supposed that the time and effort on which these output port member from which a body and the quality of the material differ is pasted up is also unnecessary, and it can manufacture very simple and it is the anxious thing of a liquid spill which is not.

[0075] (7) The above (1) In the enteral-hyperalimentation-drug preservation container of any one software back type of - (6) to said lobe Since it comes to prepare the insertion guide device for making the connection member besides a system easy to introduce in the opened output port, The above (1) after being able to do the operation effectiveness of a publication so to - (6) and also opening output port Insertion can be completed quickly, and can prevent invasion of the foreign matter from the output port concerned, or a bacillus, without being delayed in case the connection member besides a system is inserted in output port, and also by taking time in insertion Since it is the activity which the trouble on an activity -- contents liquid blows off, output port is torn, or it is turned over, and a liquid spill can be carried out -- tends to produce, It is not necessary to have such worries, and a mental burden can also be mitigated, without being avoided by the medical staff who performs insertion.

[0076] (8) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (7), since the operation effectiveness of a publication can be done so to above-mentioned (1) - (6) since said insertion guide device is a device for carrying out opening of the output port, and also it is a means very simple when attaining the operation effectiveness of a publication to the above (7), excel especially in the effectiveness.

[0077] (9) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (8) As a device for carrying out opening of said output port, although at least one heights thru/or a crevice are formed and the operation effectiveness of a publication can be done so to above-mentioned (1) - (8), so that it may extend rather than the slitting section in the field which intersects perpendicularly with the axis of this lobe at the lobe by the side of a body It can especially be said that the operation effectiveness of above-mentioned (7) - (8) is remarkable, and is one of the very useful means also in the achievement means concerned.

[0078] (10) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (8) So that it may extend rather than said slitting section as structure for carrying out opening of said output port in the field which



intersects perpendicularly with the axis of this lobe at the lobe by the side of a body Although at least one heat impression section thru/or the RF impression section are formed and the operation effectiveness of a publication can be done so to above-mentioned (1) - (8) It can especially be said that the operation effectiveness of above-mentioned (7) - (8) is remarkable, and is other one of the very useful means also in the achievement means concerned.

[0079] (11) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (8) As structure for carrying out opening of said output port, although at least one sheet-like object is circumscribed and the operation effectiveness of a publication can be done so to above-mentioned (1) - (8), so that it may extend rather than said slitting section in the field which intersects perpendicularly with the axis of this lobe at the lobe by the side of a body It can especially be said that the operation effectiveness of above-mentioned (7) - (8) is remarkable, and is one of the very useful means of further others also in the achievement means concerned.

[0080] (12) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (8) Although an opening-sized member is held at the enteral-hyperalimentation-drug passage section of a lobe and can do the operation effectiveness of a publication so to above-mentioned (1) - (8) as structure for carrying out opening of said output port until it introduces the connection member besides a system at least It can especially be said that the operation effectiveness of above-mentioned (7) - (8) is remarkable, and it is other one of the very useful means also in the achievement means concerned further again.

[0081] (13) In the enteral-hyperalimentation-drug preservation container of the software back type of the above (7) As said insertion guide device, so that the point of a sheet-like object may come out outside this output port at the time of opening of output port Since these some sheet-like objects cut deeply and it is fixed to the inside of the lobe by the side of a body rather than the section so that it may extend in the direction of an axis of this lobe, The above (1) Since the operation effectiveness of a publication can be done so to - (6) and also it is other one means very simple when attaining the operation effectiveness of a publication to the above (7), it excels especially in the effectiveness.

[0082] (14) since the rib be form in the inside of the lobe by the side of a body rather than the slitting section as said insertion guide device in the enteral hyperalimentation drug preservation container of the software back type of the above (8) -- the operation effectiveness given in the above (8) -- in addition, when the connection member besides a system be introduce, the connection member besides a system can be hold with this rib, and a seal can be carry out certainly.

[0083] (15) The above (1) In the enteral-hyperalimentation-drug preservation container of the software back type of - (14), the breadth of said lobe including said output port can do the operation effectiveness of a publication so to above-mentioned (1) - (14) by being formed widely, and also the characteristic operation effectiveness to which it is supposed that torsion of said lobe including the output port by heat sterilization processing can be prevented is done so.

[0084] (16) The breadth of said lobe which includes said output port in the enteral-hyperalimentation-drug preservation container of the software back type of the above (15) is following formula  $2 \leq y/x \leq 6$  (here).  $x$  is the breadth of said lobe including output port, and  $y$  is the breadth of the body of an enteral-hyperalimentation-drug preservation container. By being formed widely, the operation effectiveness of a publication can be done so to above-mentioned (1) - (15) so that it may be satisfied, and also the characteristic operation effectiveness to which it is supposed that torsion of said lobe including the output port especially by heat sterilization processing of the above (15) can be prevented is acquired more notably.

[0085] (17) The connection member of this invention can connect both by easy actuation by having the structure which an end can join to the output port of the enteral-hyperalimentation-drug preservation container of the above (15) or the software back type of (16), and having the structure which the other end can connect with the tube for enteral feeding supply, or an enteral feeding catheter.

[0086] (18) When the point of the side joined to a lobe including the output port of the enteral-hyperalimentation-drug preservation container of said software back type in the connection member of the above (17) has insertion guide structure for making it easy to introduce into the opened output port After opening the output port of said enteral-hyperalimentation-drug preservation container, without being delayed in case the connection member concerned is inserted in output port, insertion can be completed quickly and can prevent invasion of the foreign matter from the output port concerned, or a bacillus, and also by taking time in insertion Since it is the activity which the trouble on an activity -- contents liquid blows off, output port is torn, or it is turned over, and a liquid spill can be carried out -- tends to produce, It is not necessary to have such worries, and a mental burden can also be mitigated, without being avoided by the medical staff who performs insertion.

[0087] (19) In the connection member of the above (18), said insertion guide structure can complete insertion quickly,

without being delayed in case especially the connection member concerned is inserted in output port among the operation effectiveness of the above (18) by having insertion opening cut aslant, and the effectiveness carried out as invasion of the foreign matter from the output port concerned or a bacillus can be prevented is acquired more notably.

[0088] (20) the above (17) in the connection member of - (19), it be the ingredient which can prevent that contents begin to bleed from a connection with the output port of the enteral hyperalimentation drug preservation container of said software back type, and the effectiveness which presuppose that it can prevent especially contents liquid blow off among the operation effectiveness of above-mentioned (17) - (19), or carry out a liquid spill be more notably acquire formation or by carry out surface treatment.

[0089] (21) The connection member for the enteral-hyperalimentation-drug preservation containers of this invention The above (1) That it is easy to introduce into the output port after opening of the enteral-hyperalimentation-drug preservation container of the software back type of - (16) The insertion guide structured division of a sake, And by coming to prepare the omission prevention structured division for preventing, that a connection member falls out from output port after insertion After opening the output port of said enteral-hyperalimentation-drug preservation container, without being delayed in case the connection member concerned is inserted in output port, insertion can be completed quickly and can prevent invasion of the foreign matter from the output port concerned, or a bacillus, and also by taking time in insertion Since it is the activity which the trouble on an activity -- contents liquid blows off, output port is torn, or it is turned over, and a liquid spill can be carried out -- tends to produce, It is not necessary to have such worries, and a mental burden can also be mitigated, without being avoided by the medical staff who performs insertion.

[0090] (22) By being the cross-section elliptical insertion section in which said insertion guide structured division carried out flat in the connection member of the above (21) so that the cross-section configuration of the output port after said container opening might be suited Insertion can be completed quickly, without being delayed in case especially the connection member concerned is inserted in output port among the operation effectiveness of the above (18), and the effectiveness to which it is supposed that invasion of the foreign matter from the output port concerned or a bacillus can be prevented is acquired more notably.

[0091] (23) In the above (21) or the connection member of (22), when said omission prevention structured division is a lobe of the shape of a headband which it comes to prepare on the periphery of the insertion section to the output port after said container opening of a connection member, the above (21) or (22) effectiveness are acquired more notably.

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[Translation done.]

JAPANESE

[JP,2000-152975,A]

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CLAIMS DETAILED DESCRIPTION TECHNICAL FIELD PRIOR ART EFFECT OF THE INVENTION TECHNICAL  
PROBLEM MEANS DESCRIPTION OF DRAWINGS DRAWINGS

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[Translation done.]

## \* NOTICES \*

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

[Drawing 1] It is a schematic diagram showing 1 typical operation gestalt of the enteral-hyperalimentation-drug preservation container of the software back type of this invention. Drawing 1 (A) is a schematic diagram which the whole enteral-hyperalimentation-drug preservation container of a software back type expresses. Drawing 1 (B) is the cross-section enlarged section of the part (A-A' line) which forms heights so that it may extend in the field which intersects perpendicularly with the axis of the height of the enteral-hyperalimentation-drug preservation container of drawing 1 (A). Drawing 1 (C) is what is torn apart along with the broken line shown in the lobe of the enteral-hyperalimentation-drug preservation container of drawing 1 (A) (= it opens), and is the cross-section enlarged section of the output port (cut end made by the location of the broken line concerned) formed in the lobe. Drawing 1 (D) is the cross-section enlarged section showing the condition that pushed as an arrow head showed, and output port carried out opening from the both sides of the output port formed in the lobe of the enteral-hyperalimentation-drug preservation container of drawing 1 (C) of output port. Drawing 1 (E) is what is torn apart along with the broken line shown in the lobe of an enteral-hyperalimentation-drug preservation container when heights are not formed so that it may extend in the field which intersects perpendicularly with the axis of the height of the enteral-hyperalimentation-drug preservation container of drawing 1 (A) (= it opens). It is the cross-section enlarged section showing the condition that the whole output port has turned at it from the both sides, without carrying out opening when the output port formed in the lobe is pushed, as an arrow head shows of output port.

[Drawing 2] It is a schematic diagram showing other typical 1 operation gestalten of the superstructure of the enteral-hyperalimentation-drug preservation container of the software back type of this invention, and is the fragmentary sectional view which expresses with the body of a nutrient preservation container the 2nd closure section which has the structure where an end consists of a piece of an elastic base by which adhesion support was carried out, and a valve element part which prevents invasion of the fall bacillus and foreign matter which were prepared at the tip, and its near.

[Drawing 3] It is a schematic diagram showing other typical 1 operation gestalten of the lobe of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention. As an insertion guide device of this lobe It is a schematic diagram showing the lobe concerned in which the device (opening-ized device) for carrying out opening of the output port which at least one sheet-like object is circumscribed and becomes a lobe by the side of a body from the slitting section so that it may extend in the field which intersects perpendicularly with the axis of this lobe is prepared. Drawing 3 (A) is a schematic diagram showing the whole lobe concerned in which the opening-ized device is prepared. Drawing 3 (B) is what is torn apart along with the broken line shown in the lobe of the enteral-hyperalimentation-drug preservation container of drawing 3 (A) (= it opens), and is the cross-section enlarged section of the output port (cut end made by the location of the broken line concerned) formed in the lobe. Drawing 3 (C) is the cross-section enlarged section showing the condition that pushed as an arrow head showed, and output port carried out opening from the both sides of the output port formed in the lobe of the enteral-hyperalimentation-drug preservation container of drawing 3 (B) of output port.

[Drawing 4] It is the schematic diagram which expresses other 1 operation gestalten with the typical pan of the lobe of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention. Drawing 4 (A), (C), and (D) as an insertion guide device of the lobe of the enteral-hyperalimentation-drug preservation container lower part the enteral-hyperalimentation-drug passage section of a lobe -- an opening-ized member ( drawing 4 (A) -- the opening-ized member of the shape of a cylindrical shape in the air --) drawing 4 (C) -- the abbreviation for a solid -- spherical -- it is -- carrying out -- the opening-ized member of the Rugby ball shape -- Drawing 4 (D) is a schematic

diagram showing the connection member besides the lobe concerned in which the device (opening-ized device) for carrying out opening of the output port where it comes to hold the opening-ized member of the shape of a cylindrical shape of a having-inverse tapered shape solid is prepared, and the system which corresponds in drawing 4 (A) further. Drawing 4 (B) is a schematic diagram showing the opening-ized member currently used for drawing 4 (A).

[Drawing 5] It is the schematic diagram which expresses other 1 operation gestalten with the typical pan of the lobe of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention again. As an insertion guide device of the lobe of the enteral-hyperalimentation-drug preservation container lower part, drawing 5 (A) is a schematic diagram showing the lobe concerned in which the device which some sheet-like objects cut deeply and it comes to fix to the inside of the lobe by the side of a body rather than the section is prepared, as it extends in the direction of an axis of this protrusion. Drawing 5 (B) is a schematic diagram showing the condition (= it opened) (condition out of which the point of a sheet-like object came outside this output port (cut end)) of having torn apart along with the broken line shown in the lobe of the enteral-hyperalimentation-drug preservation container of drawing 5 (A).

[Drawing 6] It is a schematic diagram showing 1 typical operation gestalt of the lobe ( drawing 6 (A)) of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention, and the connection member besides a corresponding system ( drawing 6 (B)).

[Drawing 7] It is a schematic diagram showing other typical 1 operation gestalten of the lobe ( drawing 7 (A)) of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention, and the connection member besides a corresponding system ( drawing 7 (B)).

[Drawing 8] It is a schematic diagram showing other typical 1 operation gestalten of the lobe ( drawing 8 (A)) of the enteral-hyperalimentation-drug preservation container lower part of the software back type of this invention, and the connection member besides a corresponding system ( drawing 8 (B)). The condition (it inserted) that drawing 8 (C) introduced the connection member besides the system of drawing 8 (B) into the lobe of the enteral-hyperalimentation-drug preservation container lower part of the software back type of drawing 8 (A), It is the cross-section enlarged section of the part (A-A' line) which formed heights so that it might extend in a field in parallel to the axis of the height of the enteral-hyperalimentation-drug preservation container of drawing 8 (A).

[Drawing 9] Although the breadth of said lobe including the output port of the enteral hyperalimentation drug preservation container of the software back type of this invention be widely form so that torsion by heat sterilization processing can be prevent, it be a schematic diagram showing 1 typical operation gestalt, and drawing 9 (a) make the periphery closure section between the body of an enteral hyperalimentation drug preservation container, and a lobe the shape of a loose slope, and drawing 9 (b) narrow the breadth suddenly, without make it the shape of such a slope.

[Drawing 10] It is the schematic diagram which expresses 1 typical operation gestalt of the connection member corresponding to this when forming widely like the above said lobe including the output port of the enteral-hyperalimentation-drug preservation container of the software back type of this invention, and drawing 10 (a) is the thing of the form (it tied) which only joined the body from which aperture differs, and drawing 10 (b) is the thing of the form (it tied) which prepared the slope and joined smoothly the body from which aperture differs.

[Explanation of an encoder signal]

101 -- The enteral-hyperalimentation-drug preservation container of a software back type, 102 -- The body of a nutrient preservation container, 103 -- The 1st closure section, 105 -- The 2nd closure section, 107 -- A lobe, 109 -- Up slitting section, 111 -- The periphery closure section, 112 -- The hole for support, 113 -- The periphery closure section of both the sides of a lobe, 115 -- The periphery closure section at the tip (lower limit) of a lobe, 117 -- Lower slitting section, 119 -- Heights, 202 with an opening-ized function -- The body of a nutrient preservation container, 203 -- The 1st closure section, 205 -- The 2nd closure section, 207 -- The piece of an elastic base, 209 -- Valve element section, 307 -- A lobe, 311 -- Periphery closure section, 313 -- The periphery closure section of both the sides of a lobe, 315 -- The periphery closure section at the tip (lower limit) of a lobe, 317 -- Lower slitting section, 317 -- The lower slitting section, 321 -- A strip-of-paper-like sheet-like object, 323 -- The center section of the sheet-like object, 325 -- The both ends of the sheet-like object 321, [ -- The periphery closure section of both the sides of a lobe, ] 407 -- A lobe, 411 -- The periphery closure section, 413 415 -- The periphery closure section at the tip (lower limit) of a lobe, 417 -- Lower slitting section 420 [ 429 -- An opening-ized member, 507 -- Lobe, ] -- The connection member besides a system, 427 -- Enteral-hyperalimentation-drug passage section 511 [ -- Lower slitting section, ] -- The periphery closure section, 513 -- The periphery closure section of both the sides of a lobe, 515 -- The periphery closure section at the tip (lower limit) of a lobe, 517 527 -- A strip-of-paper-like sheet-like object, 528 -- The point of a strip-of-paper-like sheet-like object, 607 -- Lobe, 611 [ -- Lower slitting section, ]

-- The periphery closure section, 613 -- The periphery closure section of both the sides of a lobe, 615 -- The periphery closure section at the tip (lower limit) of a lobe, 617 619 [ -- Periphery closure section / 713 / -- Lower slitting section, / -- The periphery closure section of both the sides of a lobe, 715 -- The periphery closure section at the tip (lower limit) of a lobe, 717 ] -- Heights, 620 with an opening-ized function -- The connection member besides a system, 707 -- A lobe, 711 719 -- Heights, 720 with an opening-ized function -- Connection member besides a system 811 -- Periphery closure section

813 [ 819 / a -- Clearance part. / -- Heights, 820 with an opening-ized function -- Connection member besides a system ] -- The periphery closure section of both the sides of a lobe, 815 -- The periphery closure section at the tip (lower limit) of a lobe, 817 -- Lower slitting section 901 -- Enteral-hyperalimentation-drug preservation container, 902 -- The body of a nutrient preservation container, 907 -- Lobe, 911 -- The periphery closure section, 913 -- The periphery closure section of both the sides of a lobe, 915 -- The periphery closure section at the tip (lower limit) of a lobe, 917 [ -- The height between the body of an enteral-hyperalimentation-drug preservation container, and a lobe, 11 / -- Connection member, ] -- The lower slitting section, x -- The breadth of said lobe including output port, y -- The breadth of the body of an enteral-hyperalimentation-drug preservation container, z 13 [ -- Body with small aperture / 21 -- The point by the side of a body with small aperture, 23 -- Rib (heights). ] -- A body with large aperture, 15 -- The point by the side of a body with large aperture, 17 -- Insertion opening, 19 which were cut aslant

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[Translation done.]